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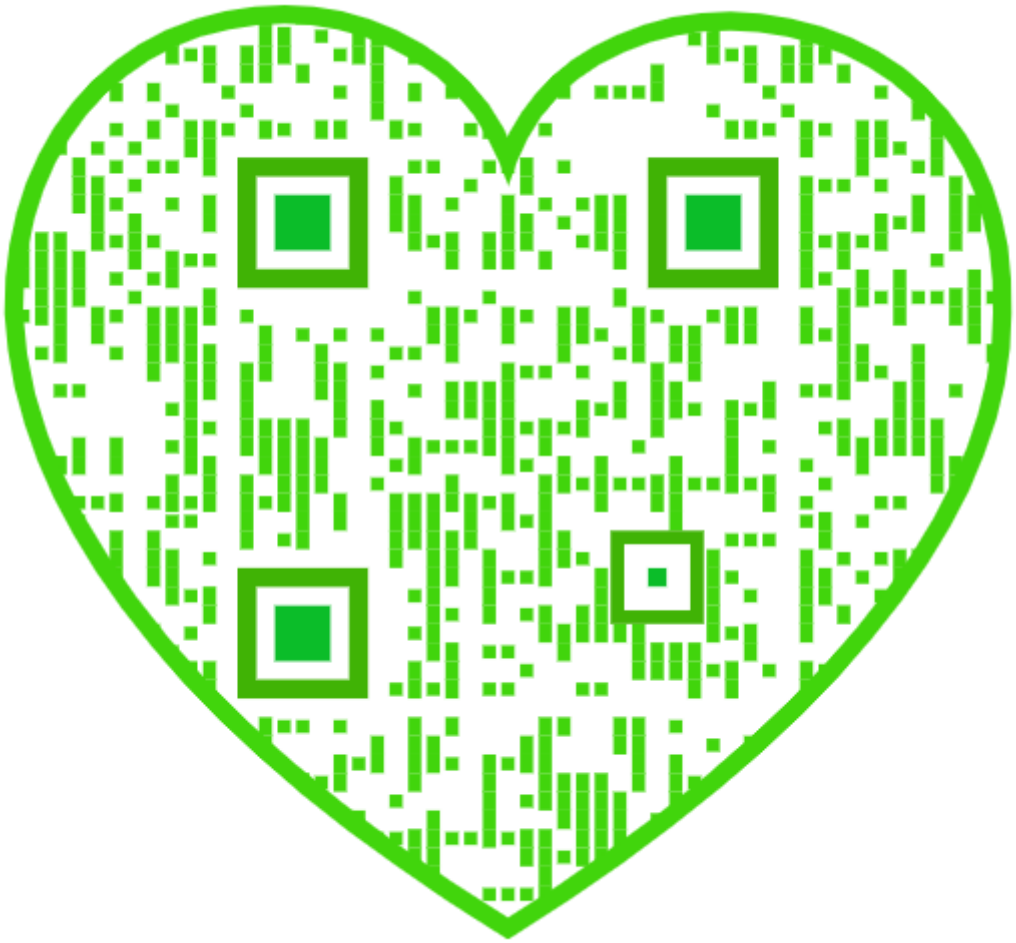

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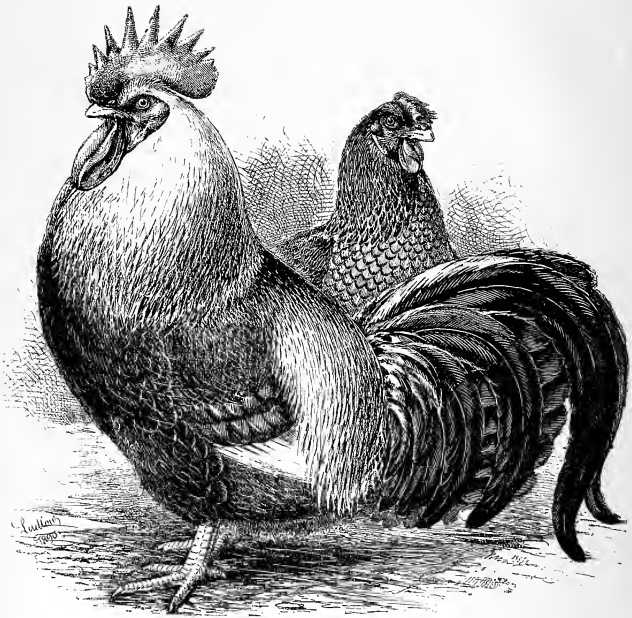

DARK, OR COLOURED, DORKINGS.

RACES

OF

DOMESTIC POULTRY

BY

EDWARD BROWN, F.L.S.

SECRETARY OF THE NATIONAL POULTRY ORGANIZATION SOCIETY; LECTURER ON AVICULTURE AT THE UNIVERSITY COLLEGE, READING; AUTHOR OF 'POULTRY-KEEPING AS AN INDUSTRY FOR FARMERS AND COTTAGERS,' ETC., ETC.

WITH ILLUSTRATIONS

LONDON

EDWARD ARNOLD

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PREFACE

OF works dealing with the races of poultry there are many, but in the majority consideration is primarily applied to external characters. Economic properties are relegated to a secondary position, or, where that is not so, the number of races dealt with is limited, and no attempt is made to include breeds of other countries, which, however little they are known at the present time, may yet hold an important position in the future. The attention now paid to poultry-breeding all over the civilized world is great, and rapidly increasing. To this we owe the development of distinctive races evolved by the special conditions of each country, but which are frequently capable of improvement when transported elsewhere. Hence it is necessary to constantly revise our ideas as to the relative values of the different breeds of poultry, more especially by reason of the fact that the attention to economic qualities which has marked the last fifteen years has led to enhanced production, and may be expected to do so to an even greater extent in the future. To this end new breeds, by which is meant those existent in other countries, and such as are formed by original combinations, should be heartily welcomed so long as they are of practical value. My object has been, therefore, to focus information as to the races of poultry met with in all the countries where breeding is conducted upon advanced lines, but to keep foremost the essential and profitable qualities, rather than to permit merely external, and consequently secondary, characters to absorb attention. How far this objective is realized the following pages will show. No attempt is made to deal with ornamental or purely fancy breeds.

My own study of poultry-breeding has now extended over a period of more than thirty years. During that time the progress made has been phenomenal, not merely in the development of commercial poultry-breeding, as indicated in the companion volume, 'Poultry-Keeping as an Industry for Farmers and Cottagers,' but also in respect to the number of breeds at our disposal. At the commencement of the period named, the Langshan and the Leghorn, the Plymouth Rock and the Wyandotte, the Campine and the Orpington, the Ancona and the Indian Game, the Maline and the Faverolles, amongst fowls, the Pekin and Indian Runner ducks, and the American Bronze turkey, not to mention many others, were entirely or practically unknown to the greater number of British breeders, and it is difficult to imagine what would be the position of affairs were these races swept out of existence. It is not too much to say that they have contributed enormously to the success attained, and that they have done more, directly and indirectly, than all the older breeds to make profitable modern developments.

In the first edition of the work already referred to announcement was made that it was my intention to write a work dealing with the different races of poultry, but that promise has not been fulfilled until now. One reason was that on approaching the subject it was found there was a large number of breeds existent of which little was known, even in the countries to which they were indigenous, and respecting which information was unavailable. Consequently, I determined, as opportunity offered, to visit these countries, to examine the birds where they were common, in order to personally see them, learn their characters and qualities, and thus be able to form a judgment as to their values. During the last few years, in fulfilment of this object, I have visited France, Belgium, Holland, Germany, Denmark, Russia, Austria, Hungary, the Balkan States, Italy, and Spain, and the results of these tours,

MAY 19 1909

covering the greater part of Europe, are seen in the following pages. Many races unknown before to British and American breeds have been found, and the type of others, of which rumour had spoken, determined. As might be expected, many races new to Western knowledge were thus revealed, for the process of evolution of poultry is as varied as the conditions under which they are kept.

A more favourable time for these observations could hardly have presented itself. Throughout Europe, as in other parts of the world, within the last decade there has been a great awakening to the importance of poultry as a branch of farm stock, and in respect to the food-supply of our great and growing populations. Hence they have received more attention than at any period of human history, and one of the first steps is seen in the improvement of existing breeds and the introduction of newer and more profitable stock. When this stage is reached, productiveness in respect to eggs and flesh becomes of supreme importance, and a race is judged by what it will yield in either or both of these directions, not what its colour of plumage or fancy points may be. Many of the breeds of poultry lack much in respect to fixity of type, and the great majority, more especially those found in Mid, Eastern, and Southern Europe, cannot compare favourably in productiveness with the best races met with in Western Europe and America. But they are capable of great improvement in these directions, and some, at least, will doubtless ere long, when the principles of selection and breeding are applied to them, be equal to, and perhaps take the place occupied by, our more prominent breeds, when the latter have lost some, at least, of their present virility as a result of our intensive methods.

An attempt is made to trace the origin, history, and distribution of domestic poultry, and to show the evolution of breeds and their classification. The question of distribution is of very great interest, and certain great streams, following the migrations of man, the trend of political influence or commerce, can be traced. Upon this point there is much to be learnt. The farther afield the student travels, the more is the necessity for wider observation apparent. It is evident that one great stream passed by or from China through Central Asia and Siberia to Eastern Europe, perhaps, following the great Mongol invasion in the thirteenth century, but upon that we have no reliable information. Probably many new races of poultry will yet be discovered in Asia, and there is no part of the world which appears to offer the same results to the traveller in search of fresh forms of poultry as that continent. Doubtless its treasures will be revealed some day.

In respect to classification, I have followed in Chapter II. the plan first adopted in the companion volume, and which has since become general for utility poultry, but have greatly extended it by the inclusion of tables, giving in a concise form leading characters and qualities. But in dealing with the races of fowls I have been compelled, for simplicity of treatment, to divide them in accordance with the countries of their origin. As far as possible, the origin, history, and economic qualities of each breed are given, as well as a description, and it is believed that this method will facilitate reference, and lead to appraisement of their respective merits. It will be seen that I have not laid an undue stress upon external characters, but given them their proper position, which is much lower than is generally accorded to them by breeders for exhibition. And, further, as explained in Chapter XVII., I have paid a lesser amount of attention to the colour of the females than of the males, believing that the fixing of rigid standards for hens is wrong in principle and against Nature. The system here advocated is antagonistic to all the previously-adopted canons, and I am prepared for very strong criticism upon this point. It is, however, the result of wide and careful observation, and I believe that in process of time it will be generally accepted by all who do not make 'fancy' characters their chief object in breeding. This work is not written for fanciers as such. I have no objection to them nor yet to their methods, but their aim is not that of the practical poultry-breeder, and it is the latter I seek to serve. The judging-table in the Appendix will not appeal to breeders of exhibition poultry, but may prove useful where utility is the main object.

Special attention is called to the chapters dealing with external characters and their values, and the laws of breeding and their application. The former, I believe for the first time, seeks to learn the

correlation between external characters and internal qualities. That every part of the fowl economy has some meaning or influence can scarcely be questioned. In the light of greater observation and research some of this may need revision, but it is an earnest attempt to solve an admittedly difficult problem. If we can appreciate the real value of the variations found in the races of poultry the work of breeders will be greatly simplified. As to the laws of breeding, here, too, the extension of our knowledge must lead to great results—to that quicker attainment of our objective, and to the avoidance of those errors which may hinder complete success.

Poultry-breeding is now an international pursuit, knowing no frontiers or arbitrary divisions. To facilitate intercommunication, I have prepared a nomenclature of races and sub-races in several languages, which is given in the Appendix, in which is also given a Scale for judging poultry on utility lines.

As far as possible I have acknowledged all references in the text, and where illustrations have been supplied in many cases these are named. But in other ways I have received assistance from many of those who are interested in this subject. The Count de las Navas, Librarian to His Majesty the King of Spain at the Royal Palace, Madrid, has kindly made researches as to the introduction of the turkey into Europe, part of which reached me after the earlier pages had gone to press, and are given in Appendix C; Mr. F. R. Eaton, Secretary of the Black Sumatra Game Club, has supplied me with information as to that breed; Mr. R. Houwink junior, Secretary of the Dutch Poultry Society, has afforded invaluable assistance as to the Dutch breeds; and Mr. J. Pirkner, Chief Inspector of Live Stock, Ministry of Agriculture, Budapest, has helped greatly in connection with the Magyar races; M. Louis Vander Snickt, of Brussels, has revised the chapter dealing with Belgian races; Herr Wulf, editor of the *Geflügel Zeitung*, Leipsic, that upon German breeds; and Mr. A. F. Hunter, of West Roxbury, Massachusetts, U.S.A., that upon American races. I have received valuable aid in the preparation of the nomenclature of races and sub-races from the Count de las Navas, of Madrid; Mr. S. Spanjaard, of The Hague; Herr Wulf, of Leipsic; Mr. W. A. Kock, of Copenhagen; Mr. Endre Gyorgy, late Hungarian Minister of Agriculture, and Mr. J. H. C. Rickehaus, of St. Petersburg and London. Translations have been made for me by Mr. E. T. S. Dugdale from Italian and Spanish; by Mrs. Bentley from Dutch; by Mdlle. Gzosy from Hungarian; and by my son Mr. Will Brown, from German works. I have to gratefully acknowledge permission to use the following illustrations and blocks: The editor of *Poultry*, Black Leghorn and Black Orpington; Messrs. Vinton and Co., Limited, Silver Spangled Hamburgh cock, Aseel cock, and pair of Courtes Pattes; Mr. R. Houwink junior, of Meppel, Holland, Dutch breeds; Mr. J. Pirkner, of Budapest, Magyar fowls and White turkeys; the Hon. Sybil Amherst, Embden geese; Dr. Wheeler, of the State Agricultural Experiment Station, Kingston, Rhode Island, U.S.A., African and Chinese geese; and the Royal Agricultural Society of England, Cambridge Bronze turkey, as well as others whose names are given below the respective blocks.

EDWARD BROWN.

The Chestnuts,
Theale, Berks,
1906.

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RACES OF DOMESTIC POULTRY

CHAPTER I

ORIGIN, HISTORY, AND DISTRIBUTION OF DOMESTIC POULTRY

Fowl—Duck—Goose—Turkey

IN endeavouring to trace the origin of our domesticated breeds of poultry, it is essential at the outset to remember that the first civilization of man was Asiatic, which to a large extent explains why so many species of domestic animals have come to us from that continent. When man lived in the primitive state, and was a savage, as can be proved by the small number of uncivilized races yet known, animals and birds were wild also. He lived by hunting and shooting, migrating to follow the supply of food, and increasing —or decreasing—in numbers largely in conformity with the number of animals and birds within his reach, for he existed principally upon the flesh of those creatures which could be trapped or killed. Many of the earlier forms of arms were apparently devised to assist him in his work.

Not until man began to realize the value of wealth did he attempt to bring the lower races into direct subjection. It is clearly shown in the Old Testament Scriptures that the earliest developments were when the ancients became owners of flocks and herds. As Mr. G. L. Gomme* states: 'The Aryans, when they entered India, were almost entirely a pastoral people, whose wealth consisted in their cattle, and who looked on agriculture and trade as degrading.' It was not until the need for mutual protection or increasing population had made the continuance of a nomadic life almost impossible, which led to the establishment of village settlements, that poultry of various species were domesticated. Then the food-supply must be provided near by. Cultivation of the land and domestication of smaller animals and birds naturally followed. How this was accomplished need not delay us, but there is a deep vein of truth in Rudyard Kipling's 'Just-so Stories.'† The animals received in return for sacrifice of liberty comfort, protection, and food. In process of time the greater requirements of growing numbers of consumers led to the adoption of new methods, and with fixed habitations food must be produced at or brought to the villages. In so far as poultry were concerned, domestication was comparatively easy, either by capture of the parent stock, or by taking alive the birds when young in the first place, and later by securing eggs from the wild nests and hatching these by means of specimens already tamed. It is known in certain species how quickly the wild instinct can be subjugated, and the progeny induced to accept new conditions. It is therefore with these facts before us that we approach the consideration of the origin of the various species of poultry.

* 'The Village Community,' by G. L. Gomme (London, 1890), p. 29.

† 'Just-so Stories,' by Rudyard Kipling (London, 1902).

FOWL.

GENUS: Galli.

NOMENCLATURE: *English*, Fowl; *French*, Volaille; *German*, Geflügel; *Dutch*, Hoender; *Italian*, Pollame; *Spanish*, Gallidos; *Danish*, Honse; *Hungarian*, Fajlák; *Russian*, Ptitsa domashni.

Considerable attention has been given to the study of the origin of the domestic fowl. Naturalists are agreed so far, but there are differences upon which they are unable to agree. For a time the opinion of the late Professor Darwin that our domestic fowls are all derived from one stock—the *Gallus Bankiva*, or jungle fowl of India—found almost general acceptance, but more recently doubts have been thrown upon that view. The question is therefore still in a state of uncertainty, and in the absence of clearer information than has yet been obtained it is likely to remain so. There is one thing certain, however, that the majority of our breeds of fowl are derived from the wild-fowl named above, and also that the fowl originated in Eastern and Southern Asia.

Naturalists recognise four members of the genus *Gallus*. These are as follows: (1) The *G. Sonneratii*, which is found in the more southern districts of India. At one time it was thought to be the parent

of our domestic breeds, but students have noted in it marked differences. The domestic fowl does not exhibit, so far as has yet been seen, any of its peculiarities, and there is now no one who accords it that position. (2) The *G. Stanleyii*, which is only found in the island of Ceylon. With the exception of the colour of the comb, this genus resembles the domestic fowl so closely that some naturalists were at one time inclined to regard it as the parent species. It has, however, a singularly different voice, which is unknown in domestic fowls. (3) The *G. furcatus*. This variety inhabits Java and the islands eastward as far as Flores, but it is so different in many characteristics from the tamed fowl that no one regards it as the parent of any races. It has green plumage, an unserrated comb, and a single median wattle. (4) The *G. ferrugineus* or *Bankiva* (Fig. 1). Of this variety Darwin* says: 'It has a much wider geographical range than the three previous species. It inhabits Northern India as far west as Scinde, and ascends the Himalayas to a height of 4,000 feet; it inhabits Burmah, the Malay Peninsula, the Indo-Chinese countries, the Philippine Islands, and the Malayan Archipelago as far eastward as Timor. This species varies considerably in the wild state. Mr. Blyth informs me that the specimens, both male and female, brought from near the Himalayas are rather paler coloured than those brought from other parts of India, whilst those from the Malay Peninsula and Java are brighter coloured than the Indian birds. . . . The wild *G. Bankiva* agrees most closely with the black-breasted red game breed in colouring and in all other respects, except in being smaller and in the tail being carried more horizontally; but the manner in which the tail is carried is highly variable in many of our breeds. . . . It is a significant fact that the voice of both male and female *G. Bankiva* closely resembles, as Mr. Blyth and others have noted, the voice of both sexes of the common domestic fowl, but the last note of the crow of the wild bird is rather less prolonged. Captain Hutton, well known for his researches into the natural history of India, informs me that he has seen several crossed fowls from the wild species and the Chinese Bantam; these crossed fowls breed freely with bantams, but unfortunately were not crossed *inter se*. Captain Hutton reared chickens from the eggs of the *G. Bankiva;* and these, at first very wild, afterwards became so tame that they would crowd round his feet. He did not succeed in rearing them to maturity, but, as he remarks, "no wild gallinaceous bird thrives well at first on hard grain." Mr. Blyth also found much difficulty in keeping *G. Bankiva* in confinement. In the Philippine Islands, however, the natives succeed much better, as they keep wild cocks to fight with their domestic game birds. Sir Walter Elliot informs me that the hen of a native domestic breed of Pegu is undistinguishable from the hen of the wild *G. Bankiva*, and the natives constantly catch wild cocks by taking tame cocks to fight with them in the woods. Mr. Crawford remarks that from etymology it might be argued that the fowl was first domesticated by the Malay and the Javanese. It is also a curious fact that wild specimens of the *G. Bankiva* brought from the countries east of the Bay of Bengal are far more easily tamed than those of India. Nor is this an unparalleled fact; for, as Humboldt long ago remarked, the same species sometimes evinces a more tameable disposition in one country than in another. If we suppose that the *G. Bankiva* was first tamed in Malaya and afterwards imported into India, we can understand the observation made to me by Mr. Blyth, that the domestic fowls of India do not resemble the wild *G. Bankiva* of India more closely than do those of Europe.'

We have given at length these particulars respecting *G. Bankiva*, for whether the opinion that all our domestic breeds do not owe their origin to this genus ever becomes an established theory or not, it is certain that the great majority of our varieties are its descendants, and therefore it claims from us the greatest share of attention. That which has brought doubts into the minds of students has been the habits of the heavy feather-legged races from China—Brahmas and Cochins—which are altogether different from most of the other breeds of poultry. It is true that poultry-breeders have held this opinion always, but their ideas have been disregarded by naturalists as unscientific. The differences of habit were described in the *Field* newspaper by a writer as follows: 'After a year or two of preliminary examination' (this refers to fifty years ago, when Cochins were first introduced), 'I adopted this method of managing the Cochin Chinas: As soon as a brood was as big as thrushes it was taken with its nurse and put into a field. The hen was cooped until she was settled to her range, after which the coop was removed, and an ordinary tea-chest, laid upon its side, was put in its place, an old door or some loose boards being leaned over its mouth. When the birds got as big as partridges even this shelter was removed, for it was noticed that, unlike other poultry, which in similar circumstances seek the hedgerows and trees for shelter, the Cochin Chinas preferred to "jug," as partridges do in the middle of the fields. The habit is in itself quite unlike that of any other variety of poultry, all of which are, when free to choose, arboreal in their habits. The next distinction was seen when the pullets began to lay. If there were any coop accessible which had been used as a lodging, they would deposit their very abnormally coloured eggs therein; but if there were not, the descendants of some imported birds never sought for a place of shelter under a bush or some hidden spot as other poultry do, but always chose some heap of mould or small elevation,

* 'Variation of Animals and Plants under Domestication,' by Charles Darwin (London, 1885), vol. i., p. 247.

and laid on the top of this, quite indifferent to the eggs being exposed to sight, so they were above the ordinary level of the land. This peculiarity is strongly marked.

'From these idiosyncrasies I have inferred that this variety of fowl could not be descended from the tree-roosting, bush-haunting ancestor of the game cock, etc. All the indications, slight, perhaps, in themselves, yet not without weight when taken together, go to show that the ancestors of the Shanghai must have been found by "the humans" who annexed them in quarters unlike an Indian jungle, *i.e.*, in some scantily-vegetated desert, and watered—when watered at all—by rivers fed at a distance by melted snow, which came down in force when the birds were sitting on eggs. The extreme stupidity of the Shanghai proves that it could have had, in its native habitat, few enemies to contend against, as does its readiness to accept the protection of man. When both were free to range at will, the game fowl always "cut" the Cochin most persistently; and for the most part the game cock, when at liberty, will refuse to accept the advances of the widowed Shanghai hen. He will generally drive her away.'

It is evident from the tone of Darwin's works that he was well aware of the somewhat slender evidence in support of the theory that the domestic fowls are all descended from one species, for he says:* 'We have not such good evidence with fowls as with pigeons of all the breeds being descended from a single primitive stock. In both cases the argument of the fertility must go for something; in both we have the improbability of man having succeeded in ancient times in thoroughly domesticating several supposed species—most of these supposed species being extremely abnormal as compared with their natural allies—all being now either unknown or extinct, though the parent form of no other domesticated bird has been lost.' The remarkable variations in many species led the great naturalist to the belief that his opinion was the true one, and that all fowls owe their origin to the *G. ferrugineus*.

It has already been mentioned that poultry-breeders, as such—that is, those who did not pretend to be naturalists—have held the opinion that all our races of fowls were not due to one species—at least, not to one of the species now extant. Naturalists, however, have until lately accepted Darwin's theory, but in the *Field* newspaper there appeared a letter from the pen of Mr. W. B. Tegetmeier, F.Z.S., who was an associate of Darwin in many of his researches, which is an important acknowledgment that the generally accepted theory may after all be wrong. In this letter Mr. Tegetmeier says:† 'It may be regarded as most presumptuous in me to dare to contest the conclusions arrived at by the honoured master Darwin, with whom and for whom it was for some years my privilege to work; but a careful and extended consideration of the facts has led me to a different conclusion to that arrived at by him. That the domesticated fowl in India is derived from the first species is evident from the fact that sportsmen occasionally confound the wild and the tame birds.

'Last season (1884) at the Zoological Gardens, numerous half-bred birds were reared from *G. Stanleyii*, and in former years many were bred from a single specimen of *G. furcatus*. There is no doubt that the several wild Galli will interbreed and produce fertile offspring as readily as do the corresponding and closely allied pheasants, in which the three species—the Chinese, the Versicolour, and the Colchican—have become so mixed that pure birds are rarer than mongrels. I have no doubt in my own mind that the wild Galli have intermixed in not a few instances, and perhaps through not a few centuries, in producing our domestic breeds.

'But it is with regard to the Eastern Asiatic type of fowl (absurdly known as Cochins and Brahmas) that my doubts as to the descent from the *G. ferrugineus* are strongest. We have in the Cochin a fowl so different from the ordinary domestic birds that when first introduced the most ridiculous legends were current respecting it. Putting these on one side, we have a bird with many structural peculiarities that could hardly have been induced by domestication. Thus, the long axis of the occipital foramen in the Cochin is perpendicular, in our old breeds horizontal, a difference that could never have been bred for, and which it is difficult to see could be correlative with any other change. The same may be said respecting the deep sulcus or groove up the centre of the frontal bone. The extraordinary diminution in the size of the flight feathers and that of the pectoral muscles could hardly have been the result of human selection and careful breeding, as the value of the birds as articles of food is considerably lessened by the absence of flesh on the breast. Nor is the extreme abundance of fluffy, soft body feathers a character likely to be desired in a fowl. The vastly increased size may have been a matter of selection, although, as the inhabitants of Shanghai feed their poultry but scantily, and, according to Mr. Fortune, mainly on paddy or unhusked rice, it is not easy to see how the size of the breed was obtained if, as is generally surmised, it arose from the little jungle fowl.

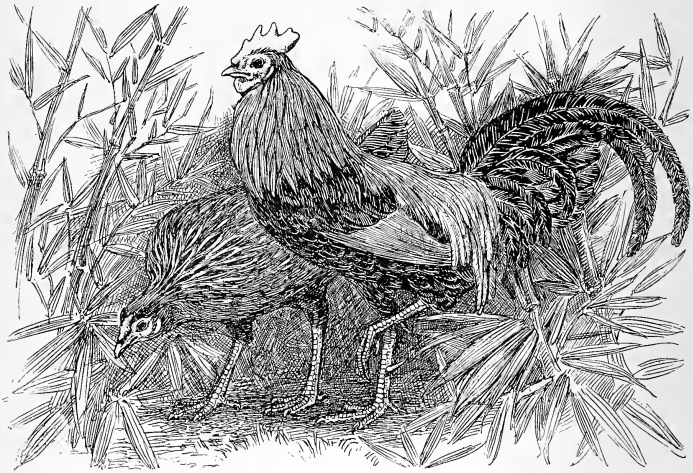
'Taking all these facts into consideration, I am induced to believe that the birds of the Cochin type did not descend from the same species as our game fowl. It may be asked what bird I would suggest as the origin of these Eastern Asiatic breeds. In reply I would suggest the possibility, or even probability, of their being descended from some easily captured and

* 'Variation of Animals and Plants under Domestication,' by Charles Darwin (London, 1885), vol. i., p. 251.

† *Field*, London, September 26, 1885.

readily domesticated short-winged species that may have entirely passed into a state of domestication, as has the camel and the horse. I can see no inherent impossibility in this suggestion, nor any fatal objection to the theory I have advanced.'

We have, therefore, arrived thus far, namely, that there is more than a doubt in the minds of naturalists, for Mr. Tegetmeier is not alone in his opinion as to the theory advanced by Darwin. The idea is that we must go further back to find a common progenitor, one which was the parent of all the four species of Galli the fact that another feature of *G. furcatus*) not usually found in the domestic breed most resembling it still appears occasionally by reversion in that same breed. Hence, we are disposed to think that the original type can only be found still further back; that it diverged into various sub-types, including the four wild breeds still known, and developed through the *G. Bankiva* into the Games, while other breeds were reached through collateral branches, now either extinct or possibly still further modified into the present other three known races. It is possible enough that some wild



Drawn by *J. W. Seaby.*

FIG. 1.—GALLUS FERRUGINEUS.

that have been named. It is very interesting to note that the first advancement of this view was not from a naturalist, but a poultry-breeder. In the first edition of Wright's 'Book of Poultry' the following appeared:* 'There are tendencies in some of our domestic breeds which certainly are not due to the *G. ferrugineus*, and which, as they are found in the *G. furcatus*, are probably the result of natural rather than artificial development, a conclusion which is strengthened by species or variety of greater size than any now known may have either disappeared or become degraded.'

To sum up, therefore, it may be taken that with the domestic fowl, as with many other natural forms of life, we can go so far back, but no further. The probability is that, as in the case of dogs, all the varieties of fowls do not owe their origin to any one species, at any rate of those now extant, and that we must look to another progenitor than the *G. ferrugineus* for several of the later introduced races, more especially those from China.

* 'Book of Poultry,' by Lewis Wright, first edition (London, 1874), pp. 500-501.

DUCK.

GENUS: Anas boschas.
NOMENCLATURE: *English*, Duck; *French*, Canard; *German*, Enten; *Dutch*, Eenden; *Italian*, Anatre; *Spanish*, Patos; *Danish*, Ænder; *Hungarian*, Kacsa; *Russian*, Utka.

The suggestion has been made that the domesticated duck known in Europe was originally imported from Asia, which is probably true to some extent. It is impossible, however, to come to any other conclusion than that the majority of our breeds have descended from the mallard, or wild duck, which is widely distributed, ranging from Eastern Asia to North America, and is a regular visitor to nearly every part of Europe. When and how such domestication first took place it is difficult to say, but certainly before the Christian era, for Columella, who lived in the first century and wrote upon animal husbandry, says that 'when anyone is desirous of establishing a duckery, it is a very old mode to collect the eggs of teal, mallard, etc., and to place them under common hens; for the young thus hatched and reared cast off their wild tempers, and undoubtedly breed when confined in menageries. For if it is your plan to place fresh-caught birds that are accustomed to a free mode of life in captivity they will be slow breeders in a state of bondage.'* He further says that the places in which they are kept should consist of high walls, covered in to prevent their flying away. That is proof of the partial domestication, as it could scarcely be expected that they would be tamed in the first generation.

Dixon states† that he is inclined 'to consider our race of farmyard ducks as an importation, through whatever channel, from the East, and to point out the discovery of the passage of the Cape of Good Hope (1493) as the approximate date. The early voyagers speak of finding them in the East Indies exactly similar to ours, and the transmission of a few pairs would be a much easier task than to subdue the shyness and wildness of the mallard.'

It is possible that such importations took place 400 years ago, as they have within the last half century, and may thus have introduced specific races; but the evidence of Columella given above shows that prior to that time domestication had taken place in Europe, and we are justified in assuming that the same method was adopted in Asia. Mr. Dixon says further:‡ 'I know of no instance in which anyone has finally succeeded in founding a permanent tame farmyard race of ducks by breeding from the mallard.'

The late Mr. Edward Hewitt in 1862 § described his attempts to breed wild ducks upon a pond or lake near his residence. The eggs were taken from the wild birds' nests and hatched under an ordinary duck. 'Until a month old we "cooped" the old duck, but left the youngsters free. They grew up invariably quite tame, and bred freely the next and following years. There was one universal drawback, however. Although not admitted when grown up to the society of tame ducks, they always in two or three generations betrayed prominent marks of deterioration; in fact, they became domesticated. The beautiful carriage of the wild mallard and his mate, as seen at the outset, changed gradually to the easy, well-to-do, comfortable deportment of a small Rouen, for they, at each reproduction, became much larger.' Mr. Hewitt made several experiments of this nature with the same result, in some cases white feathers appearing in the wings.

The conclusions arrived at by the late Professor Darwin were that all the domesticated ducks have descended from the wild duck. He says* that 'almost all naturalists admit that the several breeds are descended from the common wild duck (*Anas boschas*); most fanciers, on the other hand, take, as usual, a very different view. Unless we deny that domestication, prolonged during centuries, can affect such unimportant characters as colour, size, and, in a slight degree, proportional dimensions and mental disposition, there is no reason whatever to doubt that the domestic duck is descended from the common wild species, for the one differs from the other in no important character. We have some historical evidence with respect to the period and progress of the domestication of the duck. It was unknown to the ancient Egyptians, to the Jews of the Old Testament, and to the Greeks of the Homeric period. . . . The origin of the domestic duck from the wild species is recognised in nearly every language of Europe, as Aldrovandi long ago remarked, by the same name being applied to both. The wild duck has a wide range from the Himalayas to North America, and the crossed offspring are perfectly fertile. Both in North America and Europe the wild duck has been found easy to tame and breed.'

And the great naturalist also calls attention to a striking peculiarity,† that 'in the great duck family one species alone—namely, the male of *A. boschas*—has its four middle tail feathers curled upwardly. Now, in every one of the above-named domestic breeds these curled feathers exist, and on the supposition that they are descended from distinct species, we must assume that man formerly hit upon species all of which had this now unique character.'

Darwin, in the work referred to, gave a large amount of interesting information showing the universal resemblances between the mallard and races of domestic ducks, with such variations as would result

* Lib. VIII., cap. 15.
† 'Ornamental and Domestic Poultry,' by Rev. E. S. Dixon (London, 1850), p. 127.
‡ *Ibid.*, p. 129.
§ *Journal of Horticulture*, vol. xxviii. (London, 1862), p. 773.

* 'Variation of Animals and Plants under Domestication.' by Charles Darwin, M.A., F.R.S., second edition (London, 1885), vol. i., pp. 291-292.
† *Ibid.*, p. 294.

from changed conditions and the increased and decreased use of the limbs. With reference to what he states as to the opinions of fanciers differing from those of naturalists, this is explainable by the fact that the latter think chiefly of the species, whereas the former are concerned with breeds. The variations in external characters are so important to breeders that they are disposed to unduly exalt their value; but these are secondary, and can be produced with comparative ease. The one serious argument in favour of non-relationship between the wild and tame races is that the former are monogamous and the latter polygamous, but that is insufficient to weigh against the mass of evidence on the other side. We can accept, therefore, the contention that the mallard is parent to all our domestic ducks, but are equally convinced that some of our breeds have been domesticated in Asia and others in Europe.

GOOSE.

Genus: Anser cinerens.
Nomenclature: *English*, Goose; *French*, Oie; *German*, Ganse; *Dutch*, Ganzen; *Italian*, Oche; *Spanish*, Ocas; *Danish*, Goes; *Hungarian*, Ludak; *Russian*, Gûs.

Unlike the domestic fowl and the turkey, neither of which is indigenous to Europe, the former coming from Asia and the latter from America, the goose in its wild form is a denizen of Europe and North Africa, which fact doubtless explains much in relation to it. But members of the same family are known in other parts of the globe. Hehn * indicates that references to the goose are found in Sanskrit writings, and says that 'it would be rash to conclude from this that the goose was a tame domestic animal among the primitive Aryan stock before the great migration. It was doubtless well known and much sought after on the lakes and streams and in the swampy lowlands, as it is now among the nomads and half-nomads of Central Asia. Where it was still abundant and easy to obtain there was no necessity for breeding it artificially in confinement; and so long as men's manner of life was unsettled, a bird that takes thirty days to hatch and a proportionate length of time to rear its young was unsuitable to the economy of a pastoral people. But when comparatively stationary settlements were found on the shores of lakes, the young birds could easily be fetched down from their nests by boys, have their wings clipped, and be brought up in the households; if they died, the attempt was repeated until it finally succeeded, especially as the wild goose is, comparatively speaking, one of the easiest birds to tame.'

The wild goose, commonly called the Greylag (*Anser ferus*), is distributed all over Europe, but it conducts its young to the shores of the Mediterranean, both northern and southern, there to rear them, breeding, however, in the colder latitudes.

Of wild geese the varieties known in this country at the present time are the Greylag, already mentioned, the Bean, the White-fronted or laughing goose, and the Pink-footed. It is very generally concluded that our domesticated varieties are all descended from the Greylag, which at one period bred extensively in the fen districts of Eastern England; but since the drainage of those areas it has been compelled to find a location elsewhere. In Scotland, both on the mainland and in the western islands, it is found, but to a much greater extent in Ireland, especially in some of the central counties. The Bean goose is much more common, and large numbers of the White-fronted geese arrive as soon as winter sets in on the Continent of Europe. Between the Greylag and the Bean there are resemblances which are apt to mislead. At one time it was suggested that the Chinese goose was of a distinct species to the Greylag, but Mr. Blythe testified that the two breed together, and that their progeny were fertile. His opinion was that the common goose of India was a hybrid between these types. What has led naturalists to conclude that the domestic goose owes its origin to the Greylag is not only that the two will breed together, but that there are strong resemblances between them. In Wingfield and Johnson's 'Poultry Book'* Mr. Yarrell is quoted as saying that 'the Zoological Society of London, possessing a pinioned wild Greylag gander, which had never associated with either Bean goose or White-fronted goose, though both were kept on the same water with him, a domestic goose, selected in the London market from the circumstance of her exhibiting in her plumage the marks which belong to and distinguish the true Greylag species, was this season (1841) brought and put down to him. The pair were confined together for a few days, became immediately good friends, and a sitting of eight eggs was the consequence. These eggs were hatched, and the young proved prolific. Some were hatched in two following seasons, and some of their descendants still remain at the Gardens.' And when at the Regent's Park the Greylag and the domestic goose have been placed side by side, the resemblances between the two proved most apparent. It may, consequently, be taken as an accepted opinion that the origin of our domestic varieties is to be found in the Greylag goose. The method of domestication is not recorded, so far as we are aware, but it would be either by securing eggs or young birds from the nests of the wild parents.

Charles Darwin† writes: 'Although the domestic goose certainly differs somewhat from any known wild

* 'Wanderings of Plants and Animals from their First Home,' by Victor Hehn (London, 1885), p. 278.

* 'The Poultry Book,' by Wingfield and Johnson (London, 1853), p. 260.

† 'Variation of Animals and Plants under Domestication,' by Charles Darwin, vol. i., pp. 304-305.

species, yet the amount of variation which it has undergone, as compared with that of most domesticated animals, is singularly small. This fact can be partially accounted for by selection not having come largely into play. Birds of all kinds which present many distinct races are valued as pets or ornaments. No one makes a pet of a goose; the name, indeed, in more languages than one is a term of reproach. The goose is valued for its size and flavour, for the whiteness of its feathers, which adds to their value, and for its prolificness and tameness. In all these points the goose differs from the wild parent form; and these are the points which have been selected.'

One other distinct gain from domestication is the increase of size, and this is noticeable in nearly all birds and animals which have adapted themselves to the altered conditions of life, and to the greater certainty of food resultant from domestication. And it is also true that more eggs are produced by the tame goose than by her wild sister.

TURKEY.

Genus: Meleagris.

Nomenclature: *English*, Turkey; *French*, Dindon; *German*, Truthühner; *Dutch*, Kalkoenen; *Italian*, Tacchini; *Spanish*, Pavos; *Danish*, Kalkun; *Swedish*, Kalkon; *Hungarian*, Pulyka; *Turkish*, Indian; *Russian*, Indiukh.

The scientific name given to the turkey, *Meleagris*, is accounted for by the fact that when first introduced the race was not recognised as an altogether new species, and was unknown in the Eastern Hemisphere prior to the discovery of America by Christopher Columbus. The Greeks and Romans called what appears to be the guinea-fowl *Meleagrides*, or *Gallinæ Africanæ*, and when the explorers of the West returned from their voyages of discovery to the New World, it was thought that the turkey was of that species.

Belon, the French naturalist (1553), is credited with being the originator of the erroneous classification, but Linnæus followed him, and it is now universal. The term *Meleagris Gallipavo* reveals the fact that the turkey was thought to be allied to the guinea and the domestic fowls, but scientific names are as liable to error as breed designations.

It is generally accepted by naturalists that the domesticated turkey has descended from the wild species found in Mexico and Central America (*M. Mexicana*), which appears to be correct so far as the earlier forms were concerned; but it is undoubted that many modern American turkeys, as the Mammoth Bronze, own the race found in the United States and Canada (*M. Americana*), for the introduction of wild blood has been regularly resorted to in order to secure enhanced size. We are led to this conclusion from the evidence that the turkeys imported from America into Europe nearly 400 years ago were largely black in plumage, thus closely following the Mexican, which explains why so many European breeds are black, wholly or partly; whereas the later races are bronze, which colour is characteristic of the wild American turkey.

Darwin says* that 'F. Michaux suspected in 1802 that the common domestic turkey was not descended from the United States species alone, but likewise from a Southern form; and he went so far as to believe that English and French turkeys differed from having different proportions of the blood of the two parent forms.' There is, however, very great affinity between the *M. Mexicana* and *M. Americana*, and Darwin records† that 'in the United States wild male turkeys sometimes court the domestic hens, which are descended from the Mexican form, and are generally received by them with great pleasure.'

The fact that these wild males have, since Darwin wrote, been used much more freely for breeding is further proof of their relationship, and it may safely be accepted that the two forms are varieties of the same race. Other species of turkeys are to be met with in America, such as the Honduras and the crested turkey of Mexico, but they do not appear to have been amenable to domestication.

That the turkey had been domesticated by the aboriginal inhabitants of America would appear to be certain. This view was held by Darwin, and it is not unreasonable to suppose that it would be the case, as in some of the nations thus revealed to the Eastern world there was a considerable measure of civilization. This opinion is supported by Prescott, who says‡ that 'the Spaniards saw immense numbers of turkeys in the domesticated state on their arrival in Mexico, where they were more common than any other poultry. They were found wild, not only in New Spain, but all along the continent, in the less frequented places, from the North-Western territory of the United States to Panama. The wild turkey is larger, more beautiful, and in every way an incomparably finer bird than the tame.' And, further, speaking of the city of Mexico when Cortes first visited the capital, 'no less than 500 turkeys, the cheapest meat in Mexico,' were allowed for the feeding of the vultures and eagles kept in the Royal aviaries.

A French writer§ says: 'Oviedo spoke, in 1526, of a species of Gallipavo (peacock) domesticated in New Spain, bred in that country by the Christian colonists, and which probably were embarked on the ships leaving for Europe.'

Other writers have stated that it had existed under domestication for centuries when the Spaniards con-

* 'Variation of Animals and Plants under Domestication,' by Charles Darwin (London, 1885), vol. i., p. 308.

† *Ibid.*, p. 308.

‡ 'Conquest of Mexico,' by William H. Prescott (London, 1872), pp. 44, 204.

§ 'Les Oiseaux de Basse Cour,' par Remy Saint-Loup (Paris, 1895), p. 295.

quered Mexico. Rene de Laudonniere reports to have found them on landing in North America in 1564, and twenty years later they were discovered in Virginia. As the North American continent was opened up, travellers found the wild turkey as a denizen of the woods and forests. Thus there is no doubt as to the origin of this species, as it can be traced without difficulty.

In size the wild turkey is much larger than those found under domestication. Males have been shot during recent years weighing up to 60 pounds, but these were old birds. The largest we have seen among tame specimens was 47 pounds, but it had been specially fed up, and the general average of the best birds is not more than half the last-named weight, and many others do not exceed 12 to 15 pounds at nine or ten months old. This decrease in size may be attributed to loss of vigour as a result of changed conditions, probably to limitation of exercise, but principally to the use of immature stock for breeding, as these birds do not reach their maturity until they are three or four years of age. At the same time selections would be rather for medium than very large size, as the huge specimens are not suitable for ordinary farm purposes. 'In India the climate has apparently wrought a still greater effect in the turkey, for it is described by Mr. Blythe as being much degenerate in size, utterly incapable of rising on the wing, of a black colour, and with the long pendulous appendages over the beak enormously developed.'* Buffon mentions that the turkeys found in China were not indigenous to that country, but had been imported.

With the settlement of North America and the enclosure of the open lands the number of wild turkeys will gradually be reduced. Hence the source of supply in that direction will probably be dried up, and breeders be compelled, therefore, to depend upon our present stocks. Fortunately, the distribution of the race is very wide, and it has fully adapted itself to domestication.

The names given to the turkey vary considerably, as shown above. The French name is derived from that of the hen turkey, dinde—d'Indon, or of India—which is practically that of most European countries. But the English name arises in the way explained by Hehn:† 'At the beginning of the sixteenth century "Turkish" only meant foreign, or come from over the sea; at that time geographic ideas were too indefinite to distinguish exactly the West from the East Indies, and both from the land of the Turks.' Merchants trading abroad were called Turkey merchants, and thus it is easy to see how the name came to be applied, if, as we believe was the case, the earliest birds were brought from Spain by ships calling there on returning from the Orient.

In respect to the distribution of the turkey little need be said. From Spain, where it was first brought into Europe, it spread to Britain and France, supplemented by direct importations from America, and by way of the Netherlands and Italy to other parts of the Continent.

DISTRIBUTION OF THE DOMESTIC FOWL.

From the evidence which has come to us it would appear that the sport of cock-fighting had as much responsibility for the domestication of the fowl as demand for food, and that, when once it was brought into the service of man, sport was chiefly instrumental in making the species popular. Cock-fighting has been for many centuries followed extensively in Southern and Western Asia, and in the islands of Sumatra, Java, Borneo, the Philippines, etc. In India, among the native Princes, it is yet a favourite pastime. When it is remembered that* 'the first mention of cock-fighting is said to be in the reign of Crœsus, King of Lydia (A.M. 3426), and in India it is mentioned in the "Codes" of Mann, written 1,000 years before Christ,' it will be realized how ancient is the sport. At a period when war was the natural order of things it can be understood how attractive these warrior-like birds would be to soldiers, who on their return home would take back with them specimens of such rare fowls. It is suggested that the Persians thus introduced the fowl into their own country after their conquest of India by Cyrus about 537 B.C. Two hundred years later Persia was conquered by the Greeks under Alexander, and thus the fowl was brought to Greece, where it was called the 'Persian' bird.

Upon this question there is, however, considerable doubt. Hehn states†: 'The original home of the fowl was India, and it first migrated West with the Medo-Persian invaders. In a work on the temple of the Damian Hera, Menodotus says, 'As the cock spread from Persia, so the sacred peacock spread from the temple of Hera to the surrounding districts.' In the religion of Zoroaster the dog and the cock were sacred animals: the first as the faithful guardian of flocks and herds, the second as the herald of dawn and the symbol of light and the sun. The cock is specially dedicated to Craosha, the heavenly watchman, who, awakened by fire, awakens the cock in his turn; he by his crowing drives away the *Dævas*, evil spirits of darkness, particularly the yellow, long fingered Bushyacta, the demon of sleep. A passage in the Bundesesh runs: "Halka, the cock, is the enemy of the devs and the magicians. He assists the dog, as is written in the law. Among

* 'Variation of Animals and Plants under Domestication,' by Charles Darwin (London, 1885), vol. i., p. 310.
† 'Wanderings of Plants and Animals,' by Victor Hehn (London, 1885), p. 497.

* 'Old English Game Fowl,' by Herbert Atkinson (London, 1891), p. 10.
† 'Wanderings of Plants and Animals,' by Victor Hehn (London, 1885), pp. 241-242.

the earthly creatures that plague Daruj, the cock and the dog unite their strength. He shall keep watch over the world, even as if there were no dog to protect the flocks and houses. When the cock and the dog fight with Daruj, they weaken him, who, else, would torment men and animals. Therefore, it is said, by him, the cock, shall all the enemies of goodness be overcome; his voice scatters the evil." Wherever a Persian settled he took as much care to procure a cock as to pray and wash before and during sunrise. As far as the limits of the Persian dominion reached, there, no doubt, the tame and useful, easily-transported, and at the same time so peculiar creature, found a welcome in the households of non-believers. On the so-called Harpies monument from the Acropolis of Xanthus, in Lycia (now in London), there is the figure of a god to whom a cock is brought as a gift or sacrifice. If this monument, as archæologists suppose, really belongs to a period before the taking of Xanthus by the Persians, then the Lycians must indeed have been acquainted with the cock before the spread of the Persian dominions. If the domestic fowl had been familiar to the Lycians long before the Persian time, the Greeks must have shared in the knowledge; but neither in the works of Homer and Hesiod, nor in the fragments of the elder poets, is there any trace of cock or hen. Surely among people who had no clocks the prophet that proclaimed the hours by night, the proudly struttiug, winking, crowing Sir Chanticleer, the supremely jealous sultan (*Salax gallus*) surrounded by his harem, the hot, vain-glorious champion armed with his comb, tassels, and spurs, Dame Partlet announcing to the world her last achievement—all this merry parody of a human family and aristocratic manners could not fail to be a frequent subject of description and comparison had the poets an opportunity of observing it. It did not escape even the ancients that Homer, though he used the proper names Alector and Alextroyan, seemed to know nothing of the fowl so called.

In the writings of Epicharmus, who flourished during the Persian wars, and in those of Simonides, Æschylus, and Pindar, we find the cock, already mentioned, under the proud name of Alector, as the usual companion of man. The fights between cocks became a striking example for poets as soon as the fowl was a familiar object. 'In the "Eumenides" of Æschylus, Athena warns the Athenians against civil war as resembling the combats of cocks. Pindar compares the inglorious victories of a civil war to the victories of a barn-door fowl. And it is stated that Themistocles raised the courage of his army by reminding them how two fighting-cocks risk their lives, not for hearth and its penates, but for fame alone. When afterwards the public cock-fights, which are represented on innumerable ancient monuments, were supposed to be derived from the above speech of Themistocles, it proves at least that cock-fighting was not thought as older than the Persian wars. The comic poets still call the bird the Persian bird.' *

Darwin states that the fowl figured on some of the Babylonian cylinders, for Mr. Layard had sent him an impression of these dating from the sixth or seventh centuries, and also on the Harpy tomb in Lycia about 600 B.C., from which fact he thinks that the fowl reached Europe somewhere about the sixth century B.C. The first actual reference in Western literature to the fowl occurs in the writings of Theognis and Aristophanes between 400 and 500 B.C. But fowls had evidently gone Eastward at an earlier date. Mention is made of the fowl in a Chinese encyclopædia which is said to have been compiled 1,400 years before Christ. This earlier migration is to be easily understood from the geographical positions of China and India, much more favourably situated for intercommunication than was India with the Western nations. It is also surprising that there is no mention on the Egyptian monuments of the fowl, which fact may be taken as proof that it was not then in that country, for these monuments are otherwise so full of the details of ancient housekeeping on the Nile. There are to be seen flocks of tame geese being driven home from the pastures. They and their eggs are being carefully counted, but nowhere cocks and hens; and when Aristotle and Diodorus say that eggs were artificially hatched in Egypt by burying them in dung, they must mean the eggs of geese and ducks, or refer to a later period than the Persian conquest, which Diodorus seems to hint, for he commences his account of the hatching-ovens with these words: 'The Egyptians inherited many customs relating to the breeding and rearing of animals from their forefathers, but other things they have invented, among which the most wonderful is the artificial hatching of eggs.'

It is probable that by the time of the Christian era—that is, during the interregnum between the closing of the Canon of the Old Testament and the opening of that of the New Testament—the fowl had spread itself all over the western parts of Asia and the eastern parts of Europe, at any rate, though it was known in several parts of Western Europe. The reference to the crowing of the cock at the time of Peter's denial of our Lord could only have reference to the domestic fowl, and this is made in such a manner as to show that there was nothing remarkable in the crowing of the cock, but it was a sound heard daily. We can assume, therefore, that the migration of the fowl into Syria and Eastern Europe took place within the six centuries prior to the advent of Christ, and that by the commencement of the Christian era it had become familiar, and one of the ordinary domestic animals, not merely in Greece, but also in Italy, Gaul, Spain, and Britain. Cæsar found that cock-fighting was known to the ancient Britons, probably intro-

* 'Wanderings of Plants and Animals,' by Victor Hehn (London, 1885), p. 243.

duced by the Phœnicians, by which date in Italy domestic birds were bred chiefly for their flesh qualities.

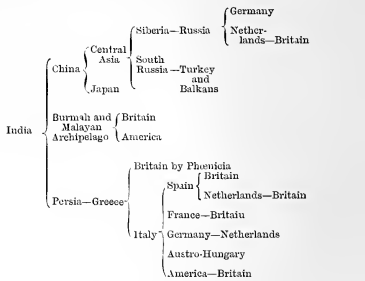
In the chapters dealing with the various races of poultry information is given as to distribution of individual breeds in more modern days, but our difficulty is as to ancient periods of the world's history. It would be interesting to trace the wanderings of the different races of men, for by doing so we should be better able to understand the passing of the fowl from its original habitat to all parts of the earth, but that cannot be done here.

Hehn says,* speaking of the domestic fowl: 'They may have come straight from Asia to the kindred nations of the South Russian steppes and the Eastern slopes of the Carpathian Mountains, whose religion agreed with that of the other Iranian races, and some of whom already practised agriculture in the time of Herodotus; or by way of the Greek colonies on the Black Sea; or from Thrace to the tribes on the Danube; or from Italy by way of the ancient commercial roads across the Alps; or through Massilia to the regions of the Rhone and the Rhine; or, finally, by several of these ways at once.'

Although it is very difficult to trace the distribution of fowls, as there are so few actual records, in the following diagram we do so as far as our present knowledge enables us to do so.

* 'Wanderings of Plants and Animals,' by Victor Hehn (London, 1885), p. 247.

DISTRIBUTION OF THE DOMESTIC FOWL.



It will be seen that there were practically two great streams, one by way of Persia and Greece to Southern Europe, and the other by way of China, Central Asia, and Siberia to Russia, Turkey and Eastern Europe.

CHAPTER II

EVOLUTION AND CLASSIFICATION OF BREEDS

Present characters largely artificial—Effects of use and disuse—Habits of life—Correlative variability—Change of conditions—Food—Crossing—Other influences—Natural selection—Artificial selection—Modern breeding—Results of domestication—Classification—Division of races—Choice of breed—Technical terms—Various forms of combs—Feather markings

IN the previous chapter it is shown that originally all the races of fowls, of ducks, of geese, and of turkeys were respectively similar, and it is now our purpose to consider the causes which have produced so large a number of races and sub-races. It is desirable in this connection to realize that the special characteristics and qualities of the domestic races of poultry are to a large extent artificial. The size of body and prolificacy, the colouring of plumage and special peculiarities met with in many varieties of domestic poultry, are absolutely unknown amongst wild birds. That being so, there must always be a tendency towards the original type in the first place, and in the direction of fresh developments in the second. The same forces are at work even amongst wild birds, though to a lesser degree. Later observations of naturalists have proved that the process of evolution is one of continual change, and if this is true when birds and animals are living under more or less uniform conditions, it is specially so with alteration of habits and variation of food, when they are brought into the service of man.

Effects of Use and Disuse.—One of the first changes induced by domestication is due to the effects of use and disuse of parts of the body. By studying the structure of our domestic animals it is found that there are sections of the body which apparently have no use at the present time, whilst there are others which are larger and more fully developed than in the wild progenitors. The explanation of these changes is that under one set of conditions there was a demand upon the system which is not needed under others, and it is very clearly seen that unless an organ or limb is used there must always be a tendency to diminution in size and development. Whereas, on the other hand, if used to a greater extent than had been the case before, the organ or limb grows in strength and in size. It is needless in this connection to give instances, for the fact is so self-evident that it need only be mentioned to be understood. The late Charles Darwin says:* 'It is notorious that increased use or action strengthens muscles, glands, sense organs, etc., and that disuse, on the other hand, weakens them. It has been experimentally proved by Ranke that the flow of blood is greatly increased towards any part which is performing work, and sinks again when the part is at rest. Consequently, if the work is frequent the vessels increase in size, and the part is better nourished.'

Habits of Life. — The change of habits of life tends also towards variation, and in this respect there is a marvellous power of acclimatization in races of poultry. It must be remembered that these races originated in a hot climate, and that distribution over the more temperate zones is almost entirely due to the action of man. Animals in their wild state have to seek for their own food, and expend a large amount of energy in so doing, which has the tendency to keep down size of body. Under domestication their needs are provided for, and thus there is always a disposition to increase of size in certain parts of the body. The question of acclimatization is one which has not been fully explained, but it appears to be evident that under new conditions the tendency is generally at first towards enfeeblement, due to strain upon the system. This may sometimes be scarcely discernible owing to better food-supplies, but it is in many cases evident to the observer. Nature, however, has a marvellous recuperative power, and within a comparatively short time the balance is restored, and frequently the change is beneficial in many directions, as seen below.

Correlative Variability.—One of the most potent influences making for these changes is what is com-

* 'Variation of Animals and Plants under Domestication,' by Charles Darwin, F.R.S. (London, 1885), vol. ii., p. 285.

monly called 'correlative variability.' This is a most difficult question. Why one part of the body should be influenced by changes in another has never been completely explained. As Darwin says:* 'In cases of true correlative variation we are sometimes able to see the nature of the connection; but in most cases it is hidden from us, and certainly differs in different cases. We can seldom say which of two correlative parts first varies and induces a change in the other, or whether the two are the effects of some common cause.' In this case mention need only be made of the relation between the egg-organs and the comb in fowls. In the wild birds the comb is small, but under domestication it has very largely increased, which would appear to be due to the development of the egg-organs. This question is discussed fully in Chapter XVI.

Change of Conditions.—Reference has already been made to the question of changed conditions. The bringing of birds under domestication means there is not the same strain upon the system, nor yet so great an amount of exercise, which undoubtedly have a great influence in the direction of variability. The material which would otherwise be utilized in maintaining the body in health must be used in some other direction, and the absence of need for exercise means that modifications are largely induced. This is found in every branch of animal and plant life, and if it were not so the needs of man could not be met, for we cannot forget that if we depended upon animals and plants produced in the natural manner it would be impossible for the present population of the world to be supported. We do not know how many acres would be required for the maintenance of each individual, but intensity of cultivation is an absolute necessity.

Changes of climate are a very potent cause of variation. It would take a considerable amount of space to give in detail all the observations made in this direction, but those who have been concerned in the export or import of fowls from one country to another know that it is very difficult indeed to maintain the original characteristics in different climates. That is seen even, say, in transferring birds from England to America or Australia, where the climatic conditions, though distinctly different, are not extremely so. The effect of climate and soil upon production receives consideration in the companion volume,† and need not be discussed further.

Food.—Food explains much in the way of variation, and especially in these days, when the requirements of each country means that foods have to be introduced from other lands. It would be erroneous to say that any grain was indigenous to Britain, for instance, because originally no grain was grown here, the inhabitants living upon native fruits and such birds and animals as they could shoot. But cultivation for a long period of time, correlative with the acclimatization of animals, would lead us to say that oats, wheat, and barley are native to this country. Therefore these, being employed as food for poultry, would probably not have the same influence as when maize, which is not grown in the United Kingdom, is used. There is also the question of the richness of the food, and it cannot be doubted that food has a very great influence upon variations. If a family of fowls has been kept under one set of conditions and fed more or less upon the same class of food, and some members thereof are removed elsewhere and fed upon different foods altogether, it is only natural to expect that variations will be accentuated.

Crossing.—One of the most important influences which make for variation is crossing. Birds in which there has been a cross always show a greater tendency towards uncertainty of type, and as most of our breeds have rightly or wrongly—we are bound to say more rightly than wrongly—received an infusion of alien blood within a few generations, this is liable to show itself, especially when the conditions under which the birds are kept are changed. Perhaps some reader may say that this bears out the contention that when variations occur in chickens it is an indication that there is impurity of race, but we must point out that it is wonderful how long an influence of this kind will remain present in the system, perhaps showing itself at a most unexpected time. If any breeder of poultry expects that in buying either birds or eggs he is securing something that is absolutely pure, using this term in the chemical sense, he is anticipating what cannot be looked for. As Darwin says:* 'How long this influence will last depends on the difference in the strength or prepotency of transmission in the two parent forms, on their actual amount of difference, and on the nature of the conditions of life to which the crossed offspring are exposed. But we must be careful not to confine these cases of reversion to characteristics which were given by a cross with those in which characteristics originally common to both parents, but lost at some former period, reappear. For such characteristics may recur after an almost indefinite number of generations.'

Other Influences.—Other influences also have increased the tendency to variation. The elevation of the ground upon which a race is kept will affect the size of body. We see in the case of cattle and sheep that the larger and fleshier races are almost without exception found upon the rich pastures of plains and valleys, whilst the smaller, hardier animals are almost entirely

* 'Variation of Animals and Plants under Domestication,' by Charles Darwin, F.R.S. (London, 1885), vol. ii., p. 312.

† 'Poultry-Keeping as an Industry for Farmers and Cottagers,' by Edward Brown, F.L.S. (London, 1904), pp. 36-42.

* 'Variation of Animals and Plants under Domestication,' by Charles Darwin (London, 1885), vol. ii., p. 9.

met with in hilly districts. Were it necessary, proofs could be given, but the fact is so fully recognised that they are not required, more than to say that transferance of mountain sheep to the lower-lying lands will modify them considerably in the course of a generation or two, and *vice versâ*. It may, therefore, be reasonably assumed that similar effects are produced with poultry, except where counteracted by artificial selection. In respect to coloration of plumage, the law to which the late Mr. Herbert Spencer gave the name of 'survival of the fittest' has had a potent influence in fixing the colour of races, owing to the fact that the birds whose plumage most nearly conformed to their surroundings, and consequently could avoid observation by their enemies, would be perpetuated, and survive in the struggle for existence.

Natural Selection.—From what has been stated it is evident that the natural tendency to variation has been, and is, much greater under domestication than when the birds are in a wild state; in fact, that a process of natural selection has been at work throughout the centuries, and is increased by change of conditions and food. When the fowls had become acclimatized, had adapted themselves to their new conditions, there would be a strongly marked development of one type, determined to a considerable extent by the 'survival of the fittest,' referred to above. This would not be restricted to plumage, but would apply to size and structure of body. Hence we have an explanation why at one time nearly every country or district had in their fowls a common type of remarkable uniformity. Were the same climatic and soil conditions applied to a wide area, the variations from that type would be few, but in diversified countries like Britain they are much greater. The fowls called 'barn-door' or 'commune' served the purpose until increase of population and of needs compelled other methods, and man, for his own purposes, adopted what is known as artificial selection. To the former is due the similarity of types met with over large areas in Asia, in Eastern and Southern Europe, and in America.

Artificial Selection.—When fowls were brought under the control of man a new influence came into play, to which the name 'artificial selection' is given—that is, the arbitrary mating of birds with a view to perpetuation of specific characters and qualities. In earlier days such selection would be necessarily limited, and would affect only to a slight extent coloration of plumage, as the variations in that direction would be comparatively few. But with changed conditions, as we have already seen, marked differences would be speedily apparent, and when the owners selected for killing those not required as breeding stock, they would choose for that purpose such as did not show the special characters or qualities required. In this manner a beginning was made for the increase of distinct types. It is probable that at first selection was in two directions: first, for those qualities which made for success in fighting—namely, courage, strength of bone, size of wing, and general vigour; and, second, quiet disposition, abundance of flesh, egg production, and general acceptation of the restraints of more civilized conditions. These directions are antagonistic, and development would not be equal. That named first was the earliest.

When breeding became more intensive, and there entered into the question personal predilections for specific forms, these changes would be accentuated. It must, however, be recognised that natural selection and the variations resultant from distribution into the various countries of the world was the basis, and that without such variations artificial selection would have been practically impotent. It may thus be stated that the former has produced a few general types, and that from these the vast number of races and sub-races were evolved, following upon minor changes due to transference from the primary environment to others.

Modern Breeding.—Whilst poultry, therefore, have been known and kept for domestic purposes since long before the Christian era, it is only within the last century that there has been careful attention paid to breeds, with the exception of Game fowls kept for fighting purposes. These fowls were handed down through long centuries.

Could we but trace the pedigree of our Game fowls, it is probable that they could show a descent which would put to shame the genealogical roll of the bluest-blooded noble of Europe. A Saxon or Norman ancestry would be as nothing to it. But that is without our most careful research. With the exception of these Game fowls, until a couple of hundred years ago fowls were all classified together, and, save in one or two instances, we find no attempt at description. Even these are of the most meagre character. It is true that Columella, the Roman writer, speaks of fowls found in Italy with five toes, and gives a slight outline of their appearance; but even that leaves much to be desired. Descriptive dealing with domestic animals in bygone days does not seem to have been thought of. Nor can we wonder at that state of things. Man approached new species as we do new varieties, and his mind was filled with other and, to him, more momentous questions.

It is interesting to trace the advent of new breeds, and fortunately, so far as these last two centuries are concerned, the writings of those who gave attention to domestic poultry enable us to do this to some extent. But the absence of detail limits our powers, and there is not nearly the same information afforded as in pigeon literature. It would appear to be true that, until 'fancy' enters into any pursuit of this kind, such questions as external characteristics do not seem to be thought of, nor even internal qualities, so much as is

now the case. This question is dealt with in the chapters treating upon the different Races of Poultry.

One of the earliest books dealing with fowls was Sir Anthony Fitzherbert's 'Boke of Husbandry,' published in 1532, but nothing is said as to breeds. A hundred years later (A.D. 1631) was published Gervasse Markham's 'Cheap and Good Husbandry for the Well-ordering of all Beasts and Fowls,' in which prominence is given to domestic poultry, but only a brief description is made of the Game and the 'dunghill cocke.' As to the latter, it is said that his colour should be red. In Gent's 'Systema Agriculturæ,' published in 1675, the keeping of fowls for profit is advocated, and advice given as to management, but it contains no description of breeds. In 1708 was issued Mortimer's 'Whole Art of Husbandry,' wherein is mentioned the fact that several sorts existed, but he does not say what they were. Early in the eighteenth century a French work was published, 'The Art of Hatching and Bringing up Domestic Fowls of all Kinds, at any Time of the Year, either by Means of Hot-beds, or that of Common Fire,' by M. de Réaumur, of the Royal Academy of Science at Paris, dealing chiefly with artificial incubation. Our copy is an English translation,* but whilst several distinct kinds of fowls are referred to, no list is given.

In 1815 was published 'A Practical Treatise on Breeding, Rearing, and Fattening all Kinds of Domestic Poultry,' etc., by Bonington Moubray, which had probably more influence than any previous work in the development of poultry-keeping upon regular lines. Between 1815 and 1850 nine editions were published, and a revised edition was issued in 1854. It was the first attempt to give poultry anything like the prominence deserved, and every praise is due to the author, though his book leaves much to be desired, and is very sparse in some of its details. The illustrations are very crude, but give us an idea of what the birds were like at that time. The races mentioned numbered as follows, though it is evident others were known: fowls, 12; ducks, 4; geese, 1; turkeys, 3. In 'The Cocker,' by W. Sketchley,† upwards of twenty varieties of the Game fowls are recorded. 'Poultry. their Breeding, Rearing, Diseases, and General Management,' by Walter E. Dickson, was published in 1838, and marks a distinct advance on all works dealing with this subject up to that date, although in respect to breeds, information is very scanty. The races named by him number: fowls, 19; ducks, 3; geese, 3; turkeys, 3. Dixon's work was published in 1850, and he was apparently the first to attempt a division of the breeds, but entirely in respect to size of body. He names the following number of breeds: fowls, 22; ducks, 7; geese, 5; turkeys, 4. The year 1853 saw the first attempt to deal with poultry in an exhaustive and complete manner, worthy of the subject. This was Wingfield and Johnson's 'Poultry Book,' which, though largely devoted to advocacy of the Shanghais, other varieties are fully dealt with. The number of breeds named are: fowls, 34; ducks, 8; geese, 4; turkeys, 5. It will be seen, therefore, that within fifty years the number of recognised races of fowls had increased from twelve to thirty-four; of ducks from four to eight; of geese from one to four; and of turkeys from three to five. The majority of these additions were due to the importation of races previously unknown in Britain, but existent elsewhere. It was not until the rise of the exhibition system in the fifties that the attempt to introduce new forms by combination of existing breeds was made. The earlier steps were in the direction of fixing and improving those races already known. As we see later, in the doing so a great amount of harm resulted. Perhaps, however, that was to be expected.

* London, 1750. † London, 1814.

Results of Domestication.—Generally speaking, the effects of bringing poultry under the control of man are seen in four directions.

First: Size of Body.—The Jungle-fowl of India (*G. ferrugineus*) is a small bird, weighing about 3½ pounds, but becomes heavier when brought under domestication, even though not selected for enhanced size. It does now, however, develop much beyond 6 pounds, unless breeding with that object in view is adopted. Nearly all our larger races of fowls have come directly or indirectly from Eastern Asia, and it is evident that breeding for size has been an objective in China and the Malayan Archipelago. Small fowls are also bred in those countries. As a result, we have several breeds which reach 11 to 12 pounds in fully-grown stock. In ducks and geese the same results are apparent, but in turkeys, as explained already, size has been reduced.

Second: Fecundity.—The wild hen forms, as a rule, two nests in the course of the year, producing from twenty-two to twenty-six eggs. In all domesticated races there is a marked increase in prolificacy, more especially in certain breeds. Individual hens are known to produce upwards of 200 eggs per annum, and breed averages of 150 are by no means uncommon. The influences which have led to that result are: supply of food which stimulates the egg-organs, selection of those hens as breeding stock which have proved the best layers, and removal of the eggs as they are laid. The last named is probably the most potent. The object of a hen in laying is to perpetuate the race, and removal of the eggs postpones the development of the brooding instinct, inducing her to produce more eggs, as in the case of canaries and other caged birds. It is further true that changed conditions often induce increase of egg production, more especially where birds are transported from South to North. Nearly all migratory birds in Northern latitudes lay in

the colder areas, and it is found that many breeds brought from Southern Asia to Europe are more productive than in their native habitat.

Third: Suspension of the Maternal Instinct.—A considerable number of races of domestic poultry are unreliable or non-sitters. It would appear that the primary cause of suspension of the maternal instinct is due to breeding from the most prolific layers, with retardment, in the first place, of broodiness, followed by suspension. The disuse of any function or any part of the body leads to its diminution.

Fourth: General Enfeeblement, which is the penalty we have to pay for breeding under unnatural conditions, for inbreeding to fix defined characters, and for use as stock birds of those specimens which, in respect to vigour of body, are the least fit, even though they may show the racial type to the highest degree.

It should be realized that the first three results named are added qualities of an arbitrary nature, and can only be maintained by constant care in selection and breeding. They are rapidly lost if artificial selection is not continued. As the late Professor Drummond has so well pointed out,* 'The highest part is the latest added part, and the latest added part is the least secured part.' This subject is discussed more fully when dealing with the effects of reversion (Chapter XVII.).

Classification.—There are four methods which may be adopted in classifying the races of poultry, namely:

1. Size of body.
2. Coloration of plumage.
3. Country of origin.
4. Economic qualities.

The method first named is necessary to divide those which are too diminutive for useful purposes from the practical breeds, and to indicate † such as are valuable for egg production and flesh properties respectively. The second method is only essential to recognition of external characters, and is of lesser importance. The third is of interest as showing the origin and history of breeds, and has been adopted in the following chapters for purposes of effective division. The fourth is of greatest value to the practical poultry-breeder, to whom 'handsome is as handsome does.' What he requires to know is whether the birds are capable of yielding the greater profit as egg-producers, as flesh-growers, or by combination of the two. Excess in either direction means reduction in the other, although it is possible, as will be shown, that by sacrifice of a little on one side substantial gain may be made on the other. Economic qualities are the final court of appeal, and below the races are classified in accordance therewith.

As already mentioned, the use or disuse of any part of the body must have an effect upon the structure. It is necessary, therefore, in classifying the races of fowls in accordance with their economic qualities, to consider how the body is modified as a result of special developments. The method of lining a fowl—that is, determining its productive qualities by general type—is fully explained in the companion volume,* where are given diagrams showing how the qualities are determined, and the reader is referred to that work. But for our present purpose it is necessary to state the considerations which help us to appraise the value of our breeds of poultry. These must be mentioned briefly.

Egg Production.—In this case the organs concerned, the ovaries and oviduct, are in the posterior part of the body, which is, as a consequence, large. The influence upon the comb is explained in Chapter XVII., but it may here be stated that big combs and heavy sterns go with prolificacy. It is not enough, however, to regard number of eggs produced, important though that is. Some recorded results are given in 'Poultry-Keeping as an Industry.'† We must consider the time of year when they are laid. A hen which yielded only 100 eggs per annum, if she laid them from October to March, would be more profitable than another laying 150, who did not commence operations until the last-named month. It may be here explained that whilst all breeds can be induced, more or less, to lay in winter, those which are best in that respect are the General Purpose races, producing tinted-shelled eggs. The next consideration is the size of egg. Our market demands for the best trade that a dozen eggs shall weigh not less than 24 ounces. Reference to the tables given in the above work‡ will show that in hens' eggs these varied from 19½ to 29 ounces per dozen from adult birds, and the weights would be slightly less from pullets. Further, whilst there is a difference in the flavour of eggs produced by the different varieties, apart from the influence of food and soil, this has no appreciable value at present. And, finally, the coloration of shell, which is discussed at length§ in the previous work. Only one point need here be mentioned, namely, that as a rule the smaller hens of any given breed or variety are usually the better layers. The above remarks apply mainly to fowls, as the other species are not generally kept as egg-producers.

Table Properties.—The edible portions of fowls consist chiefly of the breast and leg muscles. The heart, liver, and outer muscles of the gizzard are used for food, but need not concern us, as they do not vary to the same extent as the motor muscles on the sternum and thighs. In the wild species the breast muscles are the greater, owing to the use of the wings in flight, but under domestication the tendency is to

* 'The Ascent of Man,' by Henry Drummond (London, 1894), p. 173.

† See Chapter XVII.

* 'Poultry-Keeping as an Industry for Farmers and Cottagers,' by Edward Brown, F.L.S. (London, 1904), pp. 28-29. † *Ibid.*, p. 23. ‡ *Ibid.*, pp. 23-24. § *Ibid.*, p. 166.

diminution of these and increase of the leg muscles by exercise, as the birds walk more than they fly, which explains why, in the races which have not been selected for breast qualities, and more especially the heavier Asiatic types, the leg flesh is highly developed. Where birds do not use their wings, as is the case with the great majority of our fowls—at any rate where cocks are not used for fighting—the muscles upon the breast can only be maintained and increased by selection. In respect to quality, there is a considerable difference in the flesh. The leg or thigh muscle is harder, closer in texture, darker in colour, and contains *pro rata* a greater amount of sinew, whereas the breast muscle is softer, lighter in colour, and has scarcely any sinew, as it consists of two layers worked by the clavicle, or merry-thought. Hence those birds are better for table purposes in which the breast has attained the highest and the legs the least development. In addition there is considerable difference in the nature of the flesh, as in some breeds it is hard and close, in others soft, thus determining the quality and flavour. On nearly all European markets white-fleshed fowls are preferred, but in America yellow is usually regarded with the greater favour. A further point is the weight of bone, which, together with the feathers, is the most expensive part of the body to produce. Heavy-boned fowls require a longer period of growth to attain killing size than if the frame and limbs are fine in bone. The latter are, therefore, to be preferred. In 'Poultry-Keeping as an Industry,'* a table is given showing the relative proportions of meat and of bone and offal on a number of races at six months old. And, finally, quiet birds fatten much the better, producing a greater increase of flesh than those which are active and restless in temperament.

Maternal Instinct.—It is necessary to keep in view whether a race can be depended upon as sitters and mothers. The instinct is suspended, wholly or partly, in many races, which fact must be recognised when making selection of breeds for practical purposes. In the majority of cases those hens which produce the greatest number of eggs are such as are unreliable or non-sitters, and with increased prolificacy in any breed the tendency will be to delay or suspend the brooding instinct.

Our method of classification, which we introduced many years ago, and which has been largely adopted, is to divide the races of poultry for practical purposes in accordance with their economic qualities. The following is the division :

FOWLS.

1. Laying or non-sitting (egg-producing) races.
2. Table (flesh-producing) races.
3. General purpose (egg and flesh) races.
4. Ornamental races.

* 'Poultry-Keeping as an Industry for Farmers and Cottagers,' by Edward Brown, F.L.S. (London, 1904), p. 25.

DUCKS.

1. Laying (egg-producing) races.
2. Table (flesh-producing) races.

GEESE AND TURKEYS.

All are bred for meat properties and not for eggs.

The subjoined tables afford at a brief glance the special qualities of each of the breeds noted in the following chapters, in which, however, are not included the purely ornamental races.

CLASSIFICATION OF FOWLS.

Laying or Non-sitting Breeds.

In these races the maternal instinct is almost, if not entirely, suspended. They are generally medium in size of body, active in habit, quick in growth, and, without exception, layers of white-shelled eggs, which, however, vary greatly in size.

Ancona.	Landhen, Danish.
Andalusian.	Leghorn.
Bearded Thuringian.	Magyar.
Bergische Crower.	Minorca.
Brabant.	Moeven.
Braekal.	Pavloff.
Campine.	Polish.
Castilian.	Ramelsloh.
Crested Dutch.	Redcap.
Du Mans.	Russian Dutch.
Friesland.	Schlotterkamm.
Hamburgh.	Scotch Grey.
Herve.	Spanish, Black.
Houdan.	Transylvanian Naked Neck.
Lakenfelder.	Voldarno.

Table Breeds.

The breeds which excel in table qualities are chiefly larger medium or large in size of body, and the softer the flesh the less active are they in habit. In several cases they are fairly quick in growth, but not so rapid as the non-sitters, which are preferred as milk chickens for that reason. They are in the majority of cases good sitters and mothers, the exceptions being among the French races. Nearly all save the Game, Indian Game, Malay, and Aseel, lay white-shelled eggs.

Antwerp Brahma.	Du Mans.
Aseel.	Estaires.
Black Sumatra.	Game.
Breda.	Indian (Cornish) Game.
Bresse.	La Flèche.
Bruges.	Malay.
Caussade.	Mantes.
Courtes Pattes.	Orloff.
Crèvecœur.	Padovana.
Dorking.	Sussex.

General Purpose Breeds.

The definition here adopted is intended to designate those races in which the qualities are equally balanced without excessive development either for laying or

table purposes. As a rule they are large in size of body, but are heavier in bone, and consequently slower in growth, than either of the two previous classes. What they lose in egg production, as compared with the non-sitters, they gain in table qualities, and what they lose in meat properties, as compared with the table breeds, they gain in egg production. Almost without exception they are good sitters and mothers, and layers of tinted-shelled eggs, and also by nature are good winter layers.

Ardenne.
Barbezieux.
Bourbourg.
Brahma.
Cochin.
Dominique.
Drente.
Faverolles.
Flemish Cuckoo.
French Cuckoo.
Huttegem.
Java.
Langshan.
Malines.
Orpington.
Owl-bearded Dutch.
Plymouth Rock.
Polverara.
Prat.
Rhode Island Red.
Wyandotte.

The following tables give in a convenient form the characteristics of the different races of fowls :

Characteristics.

Breeds laying Tinted-shelled Eggs.

Antwerp Brahma.
Aseel.
Bourbourg.
Brahma.
Bruges (very light).
Cochin.
Dominique.
Estaires.
Faverolles.
Flemish Cuckoo.
Game, English.
Huttegem.
Indian (Cornish) Game.
Java.
Langshan.
Malay.
Orloff.
Orpington.
Plymouth Rock.
Rhode Island Red.
Sussex.
Wyandotte.

Colour of Flesh and Skin.

White.

Antwerp Brahma.
Ardenne.
Barbezieux.
Bearded Thuringian.
Bergische Crower.
Black Sumatra.
Brabant.
Breda.
Bresse.
Caumont.
Caussade.
Courtes Pattes.
Crested Dutch.
Crèvecœur.
Dorking.
Du Mans.
Estaires.
Faverolles.
Flemish Cuckoo.
French Cuckoo.
Game (some varieties).
Herve.
Houdan.
Huttegem.
La Flèche.
Lakenfelder.
Landhen, Danish.
Magyar, White.
Malines.
Minorca, White.
Moeven.
Orpington, Buff, White, Spangled.
Owl-bearded Dutch.
Padovana.
Polverara.
Prat.
Ramelsloh.
Russian Dutch.
Schlotterkamm.
Scotch Grey.
Sussex.

Yellow or Cream.

Ancona.
Bourbourg.
Brahma.
Cochin.
Dominique.
Game (some varieties).
Indian (Cornish) Game.
Java.
Leghorn.
Magyar (except White).
Malay.
Orloff.
Pavloff.
Plymouth Rock.
Rhode Island Red.
Voldarno, White.
Wyandotte.

Grey or Greyish-white.

Andalusian.
Braekel.
Bruges.
Campine.
Castilian.
Drente.
Friesland.
Hamburgh.
Langshan.
Mantes.
Minorca, Black.
Orpington, Black.
Polish.
Redcap.
Spanish, Black.
Transylvanian Naked Neck.
Voldarno, Black.

Colour of Legs and Feet.

White.

Antwerp Brahma.
Dorking.
Faverolles.
Game (some varieties).
Herve, Cuckoo.
Huttegem.
Magyar, White.
Minorca, White.
Orpington, Buff, White, Spangled.
Prat (or light Slate).
Russian Dutch.
Scotch Grey, Mottled.
Sussex.

Pinky-white.

Bourbourg.
Crèvecœur, White.
Flemish Cuckoo.
French Cuckoo.
Houdan, Mottled.
Malines.

Dark or Slate-blue.

Andalusian.
Ardenne.
Augsburg.
Barbezieux.
Bearded Thuringian.
Bergische Crower.
Black Sumatra.
Brabant.
Braekel.
Breda.
Bresse.
Bruges.
Campine.
Castilian.
Caumont.
Caussade.
Caux.
Courtes Pattes.
Crested Dutch.
Crèvecœur, Black.
D'Herquies.
Drente.
Du Mans.
Estaires.
Friesland.
Game (some varieties).
German Creeper.
Hamburgh.
Herve, Black, Blue.
Java.
La Flèche.
Lakenfelder.
Landhen, Danish.
Langshan.
Minorca, Black.
Moeven.
Orpington, Black.
Owl-bearded Dutch.
Pavloff.
Polish.
Polverara.
Prat (or White).
Ramelsloh.
Schlotterkamm.
Spanish, Black.
Transylvanian Naked Neck.
Voldarno, Black.

Yellow.

Ancona.
Aseel.
Brahma.
Cochin.
Dominique.
Game (some varieties).
Indian (Cornish) Game.
Leghorn.
Magyar.
Malay.
Orloff.
Padovana.
Plymouth Rock.
Rhode Island Red.
Voldarno, White.
Wyandotte.

SHAPE OF COMBS.

Single.

Ancona.
Andalusian.
Ardenne.
Barbezieux.
Bearded Thuringian.
Bergische Crower.
Bourbourg.
Brabant.
Braekel.
Bresse.
Campine.
Castilian.
Caussade.
Caux.
Cochin.
Courtes Pattes.
D'Herquies.
Dorking (except White).
Drente.
Estaires.
Faverolles.
Flemish Cuckoo.
French Cuckoo.
Friesland.
Game.
German Creeper.
Herve.
Huttegem.
Java.
Lakenfelder.
Langshan.
Leghorn.
Magyar.
Malines.
Mantes.
Minorca.
Moeven.
Orpington.
Plymouth Rock.
Prat.
Ramelsloh.
Rhode Island Red.
Schlotterkamm.
Scotch Grey.
Spanish, Black.
Sussex.
Transylvanian Naked [Neck.
Voldarno.

Rose.

Dominique.
Dorking, White.
Du Mans.
Hamburgh.
Redcap.
Russian Dutch.
Wyandotte.

Pea or Triple.

Antwerp Brahma.
Aseel.
Black Sumatra.
Brahma.
Bruges.
Padovana.

Horned.

Augsburg.
Crested Dutch.
Crèvecœur.
La Flèche.
Owl-bearded Dutch.
Pavloff.
Polish.
Polverara.
Houdan (Leaf).

CLASSIFICATION OF DUCKS.

Laying Breeds.

Indian Runner.
Pekin.

Table Breeds.

Aylesbury.
Blue Swedish.
Blue Termonde.
Cayuga.
Duclair-Rouen.
Huttegem.
Merchtem.
Muscovy.
Rouen.

Characteristics.

COLOUR OF FLESH AND SKIN.

White.

Aylesbury.
Blue Swedish.
Blue Termonde.
Cayuga.
Duclair-Rouen.
Huttegem.
Merchtem.

Yellow.

Indian Runner.
Muscovy.
Pekin.
Rouen.

COLOUR OF LEGS AND FEET.

Orange or Yellow.

Aylesbury.
Blue Swedish.
Indian Runner.
Merchtem.
Muscovy.
Pekin.
Rouen.

Dark.

Blue Termonde.
Cayuga.
Duclair-Rouen.
Huttegem.

COLOUR OF BILLS.

Blue or Green.

Blue Swedish.
Blue Termonde.
Cayuga.
Duclair-Rouen.
Huttegem.
Indian Runner.
Rouen.
Russian.

Flesh-coloured.

Aylesbury.
Merchtem.

Orange-coloured.

Muscovy.
Pekin.

CLASSIFICATION OF GEESE.

Laying Breed.

Roman.

Table Breeds.

African.
Canadian.
Chinese.
Danubian.
Embden.
Russian.
Saddleback.
Toulouse.

Characteristics.

COLOUR OF FLESH AND SKIN.

Yellow or Orange.

African.
Chinese.
Russian.
Saddleback (pale).
Toulouse.

Creamy-white.

Canadian.
Danubian.
Embden.
Roman.

Dark Grey.

Egyptian.

COLOUR OF LEGS AND FEET.

Orange.

African. Embden.
Chinese, Brown (dusky). Russian.
Chinese, White. Saddleback (reddish).
Egyptian (pinkish). Toulouse.

Grey.

Roman.

Red.

Danubian.

Black.

Canadian.

COLOUR OF BILLS.

Orange.

Chinese (dusky). Russian.
Embden. Saddleback (reddish).
Roman (reddish). Toulouse.

Red.

Danubian.

Black or Purple.

Canadian. African. Egyptian.

CLASSIFICATION OF TURKEYS.

All races of turkeys are bred for table purposes.

Characteristics.

COLOUR OF FLESH AND SKIN.

White.

American Bronze. Fawn.
Black. Narragansett.
Cambridge Bronze. Ronquières.

Reddish-white.

White.

COLOUR OF LEGS AND FEET.

White.

Fawn (bluish). Ronquières. White (pinkish).

Grey.

Cambridge Bronze.

Black or Slate.

American Bronze. Black.

Salmon or Brown.

Narragansett.

COLOUR OF BEAKS.

Flesh.

Cambridge Bronze. Ronquières. White.

Horn.

American Bronze. Black. Narragansett.

Bluish-white.

Fawn.

Choice of Breed. — A question which must appeal to every practical poultry-keeper is the choice of breed. The stock-raiser, whose object is sale of eggs or birds, must keep in view those races which are most in demand, but in meeting ordinary market requirements what is merely fashion may be ignored. The determination of this question must be largely fixed by the branch of poultry-keeping adopted. A study of Chapters V. and VI. in the companion work* will place the reader in possession of the leading considerations, so far as they are known to us.

Technical Terms. — Before dealing with the various races of poultry, it is necessary that the technical terms used shall be explained. In Fig. 2 the various external characters are illustrated, and in Fig. 3 the different forms of comb are shown in comparison.

The following contains the leading technical terms used in description of the various races and sub-races of poultry. The numbers refer to Figs. 2, 3, and 4 respectively. That last named represents the different forms of feather-marking, but does not attempt to give all the variations on different parts of the body.

Barred.—In fowls so designated there are transverse but solid black or very dark bars across the feathers (Fig. 4, No. 1).

Beak.—Horny protuberance from the mouth, consisting of upper and lower mandible, with nostrils at base of former (Fig. 2, No. 7).

Bean.—Small oval tip on beak of duck.

Breast.—The fleshy part of body from the chest to stern (Fig. 2, No. 11).

Breed.—The race or family, as Dorking.

Caruncled.—Fleshy protuberances on the head.

Chest.—The front of sternum (Fig. 2, No. 10).

Comb.—The fleshy growth on top of the skull, larger in the male (Fig. 2, No. 1, and Fig. 3).

Crest.—Tuft of feathers forming a crown to the head, in some cases very large and globular (Fig. 2, No. 6).

Crop.—Food reservoir carried in recess lying between neck and body.

Earlobe.—Bare patch of skin below the ear, varying greatly in colour and size (Fig. 2, No. 4).

Face.—Flesh around the eye, usually bare (Fig. 2, No. 2).

Fifth Toe.—A supernumerary toe, found only in a few races (Fig. 2, No. 17).

Hock Feathers.—Stiff feathers above the leg-joint, usually developed in feather-footed races (Fig. 2, No. 15).

Horned Comb.—Formed by two or more spikes or horns (Fig. 2, Nos. 11 and 12).

Laced.—Each feather is edged with a narrow band

* 'Poultry-Keeping as an Industry for Farmers and Cottagers,' by Edward Brown, F.L.S. (London, 1904), pp. 28, 36.

of dark colour or black, or white surrounding the ground colour, giving an even crescentic appearance on the body (Fig. 4, No. 2). In some cases they are double-laced—that is, the margin of black, etc., is divided by a fine line of white, etc. (Fig. 4, No. 4).

Leaf Comb.—Like two large leaves opened out, with a third protuberance in the centre (Fig. 3, No. 10).

Leg and Foot Feathering.—An ornamental feature found chiefly in certain Asiatic races (Fig. 2, Nos. 19 and 20).

Mottled.—The plumage is irregularly marked with splashes or spots of darker or lighter colour, as in Houdans.

Muffs, or Beard.—Feathers found by the side of the throat and under the head in some breeds (Fig. 2, No. 5).

Neck-hackle.—Long, narrow feathers covering the neck (Fig. 2, No. 9).

Pea or Triple Comb.—Usually like three fingers on top of head, the centre elevated above the others (Fig. 3, No. 6).

Pencilled.—In this case there are bars or crescents across the feathers, formed of masses of dark lines on the ground colour, but not solid (Fig. 4, No. 6).

Primaries, Wing.—The outer flight feathers, but hidden when wing is closed.

Rose Comb.—Of varied forms; where flat, a long

FIG. 2.—EXTERNAL CHARACTERS OF A FOWL.

1. Comb.
2. Face.
3. Wattles.
4. Earlobe, or deaf-ear.
5. Muffs.
6. Crest.
7. Beak.
8. Whiskers.
9. Neck-hackle.
10. Chest.
11. Breast.
12. Back.
13. Saddle-hackle.
14. Thighs.
15. Hock feathers.
16. Spur of cock.
17. Fifth toe.
18. Inner toe.
19. Leg feathering.
20. Foot feathering.
21. Middle toe.
22. Outer toe.
23. Shank of leg.
24. Wing-bar.
25. Wing primaries.
26. Wing secondaries.
27. Outer sickles.
28. Tail.
29. Inner sickles.
30. Tail coverts.

FIG. 3.—VARIOUS TYPES OF COMBS.

1. Large single (cock).
2. Large single (hen).
3. Small single.
4. Single (high at back).
5. Rudimentary.
6. Pea, or triple.
7. Flat rose.
8. Large rose.
9. Curved rose.
10. Leaf, or strawberry.
11. Wide horn.
12. Horn.

spike stands out behind (Fig. 3, No. 7), and is carried well above the head; in the curved type the comb is smaller and lies close to the skull (Fig. 3, No. 9).

Saddle-hackle.—Long, narrow feathers, covering the root of the tail in males (Fig. 2, No. 13).

Secondaries, Wing.—The inner flight feathers, on outer side when wing is closed.

Sickles.—Long crescentic feathers of tail in males.

spot, usually oval or round, of a different colour from the ground of the plumage (Fig. 4, No. 3).

Spur.—Sharp weapon for defence, on inner side of each leg; pronounced in male, rudimentary in female; increasing greatly with age (Fig. 2, No. 16).

Thighs.—The flesh-covered part of the lower limbs (Fig. 2, No. 14).

Variety.—Division of family, as *Dark* Dorking.

Wattles.—Pendant fleshy growth from lower man-

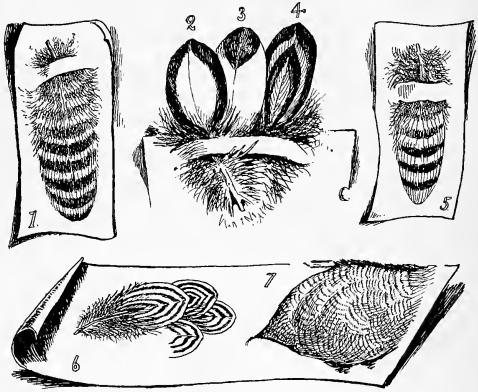


Fig. 4.—Feather Markings.

1. Barred.
2. Laced.
3. Spangled.
4. Double laced.
5. Cuckoo.
6. Pencilled.
7. Chain mail.

Single Comb.—Narrow comb, usually longer than the head and beak, carried well over the neck; evenly serrated on upper side, in large combs standing upright in the cock (Fig. 3, No. 1), hanging over on one side in hen (Fig. 3, No. 2); in smaller, upright in both sexes; sometimes the comb slopes sharply from front to back (Fig. 3, No. 3), and in others is cut away from the head at back (Fig. 3, No. 4).

Spangled.—At the extremity of each feather is a

dible, usually conforming to the comb in size; larger in the male (Fig. 2, No. 3).

Whiskers.—Feathers hanging below the lower mandible (Fig. 2, No. 8).

Wing-bar.—Transverse markings on wings of many breeds, chiefly in males (Fig. 2, No. 24).

Wing-bow.—Base of wings at shoulders.

The nomenclature of the races of poultry will be found in Appendix A.

CHAPTER III

BRITISH RACES OF FOWLS

Dorking
Sussex
Game
Indian or (Cornish) Game
Hamburgh
Redcap
Scotch Grey
Orpington

WHILST the fact is generally acknowledged that the domestic fowl originated in Asia, and from thence has been disseminated all over the globe, it is equally true that this distribution has had great influence in modifying the secondary characters, and of evolving the varieties met with in different countries. Hence in the association of any breed with one country it is intended to denote that its present form was first developed, so far as our knowledge goes, in that land, not that the species itself originated there. Mere acclimatization is not enough nor length of time during which it has been bred. The race or breed must, either by natural or artificial selection or both, have then assumed its personal and peculiar characteristics.

As an example of our meaning may be cited the Black Orpington. It was produced by an amalgamation of three breeds of different nationalities—namely, (1) Minorca (Spanish), (2) Langshan (Chinese), and (3) Plymouth Rock (American)—although we must not forget that the last named has a great amount of Asiatic or Chinese blood in its composition. Yet the Black Orpington is essentially British, in that the mating and breeding which resulted in its production took place in Britain. On the other hand, the Minorca, which has been bred for more than 100 years in South-Western England, is Spanish, in that it yet retains to a large extent those racial characters which were found when introduced. We therefore shall endeavour to classify the various breeds in accordance with the country to which they owe their special development.

It would be foolish, however, to ignore the fact that change of habitat in any race generally leads to considerable modification. Here we have an explanation why the same breed is found to vary when taken from one country to another, and in some cases from one district to another. Hence we should not expect that the Langshan will retain exactly the same type and character in Western Europe or America as in China; that Plymouth Rocks will be identical in England as in the United States; that Houdans will maintain exactly the same characters in Australia as in France. Such changes and modifications are seen in all branches of livestock and plants, and we must expect these to continue with an even increasing ratio unless very close attention is paid to selection. That the tendency referred to is increased by breeding for exhibition purposes, by reason of differing ideals, cannot be questioned, but without such artificial stimulus it would be considerable.

The influence of changed conditions has been referred to elsewhere,* but too often the question is ignored by breeders in studying the races of poultry, more especially those introduced from other countries, and which are found to differ considerably from their progenitors or from imported stock. A familiar example is the case of Jersey cattle. In spite of all the efforts of breeders, animals of that race cannot be produced in the British Isles, on the Continent of Europe, or in America, identical with those bred in the Channel Islands. The latter are smaller, finer in skin and hair, than those raised elsewhere; and even where island-bred animals are imported, the change noted is evident with their first descendants. What is true respecting that breed of cattle is equally so with poultry, which, so far as the United Kingdom is concerned, very speedily display a tendency to increase of size in body and of enlargement of comb, due largely to the moist conditions prevailing in the British Islands. To this fact is due the predilection for size, which prevails to a considerable extent, and which further emphasizes the

* 'Poultry-Keeping as an Industry for Farmers and Cottagers,' by Edward Brown, F.L.S. (London, 1904), pp. 36-42.

prevalent notion in favour of selection of big stock. Where meat qualities are the main object, striving for greater bulk of body can be understood, though it is not all gain, as explained in Chapter XVI., for with it there is a strong tendency to coarseness of flesh and of bone; but in respect to egg production undue size of body is a mistake. The best layers are not the largest birds, even within the breed or race itself, and it has been proved by practical experience that lighter-bodied hens are usually the more prolific.

The effects of climatic and other conditions, as well as the results of breeding for size, are seen in the races named above, the majority of which are of a large size. The exceptions are, first, the Game fowls; but these were bred originally for fighting purposes, and although there was necessarily the need for abundance of muscle and strong bone, it was recognised that oversized specimens could not successfully meet their more compact and agile contestants. But it is evident that the fighting Game, as now represented by what are called 'Old English' or 'old-fashioned' Game, are deeper in body and more prominent in front, and heavier than the flatter and shallower-bodied 'modern' or 'show' Game fowls. The latter have been produced in spite, rather than as a result, of climatic conditions, due to the skilful way in which they were and are bred; and, second, the Hamburghs, which are the smallest of our economic races of poultry. These have been kept small by rigid selection over a long series of years. It is a well-known fact that there is ever present in Hamburghs a tendency to increase of size, unless close or inbreeding is resorted to, and that where birds of that race are given full liberty, and are not selected with the exhibition-pen in view, they become heavier and larger. Were it not for the exaltation of the fine, neat comb of the Hamburgh into a leading feature for exhibition purposes, we believe that the breed would be much larger in body than is now the case. Had it been the intention to deal with the smaller races of poultry—notably bantams—the greater proportion of which are essentially British, having been evolved and perfected in the United Kingdom, the correctness of this contention would receive justification. They are diminutive in size because breeding has largely been to that end. The main difficulty is to keep them small, and whatever is unnatural in the way of breeding, housing, hatching, and feeding is resorted to. Our object is practical, and consequently we do not include the purely ornamental races of economic poultry.

The breeding of pure races of poultry in Britain, especially from 1850 to 1890, was largely on fancy lines, with the result that extremes were sought for, points of small value exaggerated, and variations stimulated, whilst the world was searched for rare or novel types, resulting in the introduction of alien races, many of which have, deservedly, by their valuable qualities, attained a greater amount of popularity than some of the native breeds. Undoubtedly there is a greater diversity of fowls in Britain than in any other country, but, in spite of this fact, the final court of appeal is the economic value as food-producers, and those which fail even comparatively in that direction have only a limited number of admirers. The influence of what is commonly termed fancy breeding has not been beneficial in development of economic qualities, and in several cases these qualities are lost as a consequence of undue exaltation of external characters, merely show points, useless for practical purposes, and in many cases distinctly antagonistic to production of eggs or meat. But, on the other hand, the enthusiasm of fanciers has led to the introduction of some of our most valuable breeds, without which they would never have become known, and the publicity given to these breeds by exhibitions has led to their wider dissemination. Recognising the harm done in the directions indicated, it is unquestionable that the benefit obtained by exhibitions has more than compensated for the loss, and that the balance is on the right side. But the time has arrived when we have obtained nearly all the benefit to be derived from the exhibition system, except so far as it is a legitimate stimulus to the maintenance of purity of race, and as an encouragement to new breeds. Our object should be to devote attention, whilst conserving and improving the racial characters, to the development of economic qualities, both in the native and imported breeds, with a view to the increased production of eggs and table fowls.

DORKING.

NOMENCLATURE: Dorking is used in all countries.
VARIETIES: Dark or Coloured, Red, Silver-grey, White, Cuckoo.
CLASSIFICATION: Table.
COLOUR OF FLESH: White.
COLOUR OF LEGS: White.
COLOUR OF EGG-SHELLS: White.

Origin.—It has been suggested that the Dorking fowl originated in Italy, and that its introduction was a result of the Roman occupation of Britain. The basis upon which this theory is built is very slight indeed, and circumstantial rather than direct, as the earlier references to this race do not carry us back further than the seventeenth century. In a work* published in 1854, by Mr. G. Ferguson, he states that 'from 1683 to the present time we have ample proofs that the principal fowls of this description have been bred at Dorking or its environments, and that they have had for a considerable period, and do still retain, the credit of supplying the market with the finest specimens both for appearance and the table.' What authority the writer had for tracing back the Dorking

* 'Rare and Prize Poultry,' by G. Ferguson, Secretary to the London Poultry Improvement Association (London, 1854), pp. 86-87.

to 1683 is not stated, and consequently we are unable to form any judgment as to its reliability. That, however, does not carry us to the Roman period, and it may be briefly stated that Columella, a Roman writer who lived about the beginning of the Christian era, described a breed which was evidently in many respects similar to the present-day Dorking. He stated that 'those hens are reckoned of the purest breed which are five-clawed, but so placed that no cross spurs arise from the legs.' He further says: 'Let them be of a reddish or dark plumage, and with black wings. . . . Let the breeding hens, therefore, be of a choice colour, a robust body, square build, full-breasted, with large heads, with upright and bright red combs. . . . Those are believed to be the best bred that have five toes.'

Further evidence is given as to the fifth toe especially, for Pliny, whose 'Historia Naturalis' was published A.D. 77, says: 'Superiority of breed in hens is indicated by an upright comb, sometimes double, black wings, ruddy visage, and an odd number of toes.' The evidence here given is by no means sufficient, and we are compelled to assume a great deal; but in Ferguson's work, already referred to, he states that from the southern parts of Italy friends had procured three specimens which were facsimiles of our Dorking fowls, with the exception of the size, which was smaller. During a visit to Italy in 1903 we found birds bearing some resemblance to the Dorking, although these may have been the descendants of fowls taken from Britain to the Peninsula. From the ancient references quoted it may be taken for certain that a breed of the Dorking type was known in Italy at the period of the above-named writers, and, judging the habits of the Romans from our own, it is not unreasonable to assume that when they held Britain they introduced into this country animals from their own land. Be that as it may, it is very evident that fowls of the Dorking type have been known in Britain for a very long period of time, far beyond any direct record that we possess. It is unnecessary to give excerpts from English writers, because many of these quotations would hardly help us. It was not until the nineteenth century that we have any definite information as to the fowl under its present name. We find from a work published in the early part of the eighteenth century by the great Frenchman, De Réaumur (the English edition being issued in 1750)—but which does not deal much with breeds—the following statement:* 'The hens of one of these species I mean have five toes, viz., three fore and two hinder ones; the second of these two hinder claws, which is the supernumerary, is much larger than the other; it seems not, however, to be the most useful to the foot, as it keeps frequently off the ground. As for the rest, this kind of hen is one of the largest, and deserves, on account of their considerable bulk, that we should endeavour to multiply them.'

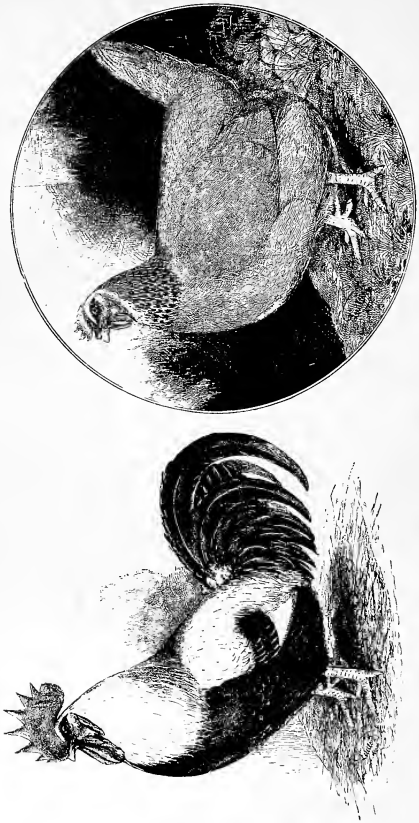
History. — The first definite description of the Dorking, or Darking, as it was then called, with details enabling us to recognise it, is found in Moubray's 'Practical Treatise,' which was first published in 1815.*

'The Darking Fowl, so called from a town in Surrey, where probably the variety was first bred, and where, and in its vicinity, they are to be found in great plenty and perfection, is, in the third degree, the largest of our fowls, well shaped, having a long, capacious body and short legs, and is a plentiful layer. The genuine colour entire white; chief distinctive mark, five claws upon each foot. The white is probably not so pure as that of certain of the dunghill fowls, nor is the colour of the flesh, that inclining to yellow or ivory shade. The Darking are the species generally made into capons. In a large agricultural survey of the county of Sussex an attempt is made to deprive Darking of the honour of originating this famous variety of fowls, with what degree of success it would be a waste of time to inquire; it is sufficient we possess such a variety, and know where it is in perfection. The surveyor pretends that the Darking fowls are all raised in the Weald of Sussex, and that Horsham is the chief market for them; that their having five claws is by no means their true and original characteristic, such peculiarity being merely fortuitous, and, in fact, objectionable; and that those so marked are deemed a bastard breed. No doubt it is probable that having five claws accidentally brought into notice certain fine and well-formed individuals; but from those proceeded a distinguished variety, and that variety bearing the name of Darking, seems a sufficient proof in favour of that town and its neighbourhood. In the meantime, the appellation "Darking fowl" has been in use, I apprehend, far beyond the memory of anyone now living; and it is not at all improbable the large Sussex breed has originated from a Darking cross, the peculiar mark of five claws employed, compared with that of the Sussex or common cocks, which were not so distinguished. Such is a common case in crossing varieties of livestock; the home variety in the end gets uppermost, as being the majority. In fine, five claws form an original distinction in the common cock and hen, adverted to by Buffon; nor is there anything inconvenient or injurious in it, the fifth claw being seldom of sufficient magnitude to cumber the foot, or cause it to scratch out the eggs, as has been apprehended.'

What Moubray here says as to the name being a sufficient proof of the breed having been originated

* 'The Art of Hatching and Bringing up Domestic Fowls,' by M. de Réaumur (London, 1750), p. 443.

* 'A Practical Treatise on Breeding, Rearing, and Fattening all Kinds of Domestic Poultry,' by Bonington Moubray (London, 1824), pp. 16-18.



FIGS. 5 AND 6.—SILVER-GREY DORKINGS.
Bred by Mr. Herbert Reeves, Ewsworth, Hants.

around Dorking cannot be accepted, but at any rate it is proof that it had been greatly developed in that district, and there can be no question that at one time the finest Dorking fowls, as we have since come to call them, were bred largely in the Weald of Sussex. There is, however, other evidence to show that fowls of this type were not confined to the South of England, for it is stated that in Cumberland birds having five toes, and with a square body, were bred there, being known as the Jew breed, and in other places as the Silver Pheasant breed, whilst in Scotland they were same year the first couple of Dorking fowls to the banks of the Thames, and to the old camp at Ambleside, or Castle Hill at Keswick.'

Economic Qualities.—Pre-eminently the Dorking is valued for its meat properties. Whilst there is a considerable difference in the laying powers of the varieties, and in families of those varieties, at the same time we do not regard the Dorking as a first-class layer. It produces large-sized, white-shelled eggs, and is an early layer, which is always a distinct

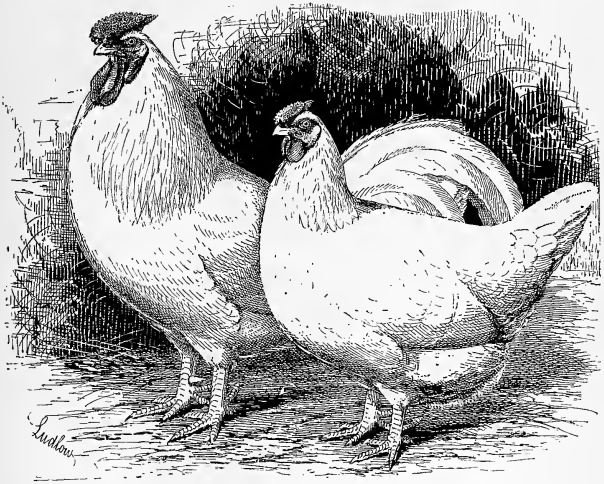


Fig. 7.—White Dorkings.

called the old Scotch breed. As one writer in the *Gardener's Chronicle* in 1848 stated: 'This Jew kind is said to be very ancient in Cumberland; and it is still very usual for the Lancashire men to carry off any fine birds of this race which they see among the mountain cottages. However, it would be a vain attempt to trace the origin of a breed which was accurately described 2,000 years ago by a Roman writer; and, as Roman stations abound in Cumberland, it is quite possible that a poultry-fancying prætor, 1,500 years since, might send or carry in the advantage in the production of table poultry, because the chickens can be hatched out early in the year. It would be a mistake, however, to unduly increase the laying qualities of the breed, because this would be at the expense of the table properties, and the Dorking, by its fineness of flesh, its delicacy of skin, the whiteness of the flesh and legs, and the abundance of meat carried upon the body, must be regarded as one of the best table fowls that it is possible to obtain. Birds of this breed, however, do not fatten quite as well as when crossed with some other varieties, and we are inclined

to think that, so far as the fattening is concerned several breeds which owe their origin to some extent to the influence of the Dorking look better when finished off, though this does not apply so much in the case of the younger specimens as in that of the older birds. It is a fact undoubtedly, as can be proved by observation at the Smithfield and other table-poultry shows, that the Dorking seldom looks as smooth and even as some of the cross-breds, and a few other pure breeds. One great point to keep in view, and it has not been as much regarded as might have been expected, is fineness of bone. In order to obtain huge size for exhibition purposes, there has been a tendency to coarseness of bone, probably due to some extent to extraneous influence. This is a point which should be carefully avoided. Whilst there must be a substantial frame, at the same time we do not desire any coarseness in the bone. The one great disadvantage which the Dorking has when bred pure is that it is found unsuitable for heavy or clay lands, for under these conditions it does not thrive well, as it appears to be unable to withstand such influences. It is important to know this, because we always advise those living upon clay lands not to go in for the production of first-class table poultry, but rather to select the yellow-legged varieties, and make egg production the primary consideration.

Description.—It would require much more space than can be afforded to discuss all the different influences that have been at work in making the Dorking such as we know it to-day; but from the evidence which is obtainable we may accept the statement that the Dorking, as bred 100 years ago and previous to that time, was to a large extent white in plumage, although there were many other colours. In an edition of Moubray's 'Treatise,' published in 1854, the white is there acknowledged as the pure Dorking, and the writer goes on to say* that 'this, the genuine Dorking breed, owing to the innumerable crosses to which they have been subjected, is now becoming exceedingly scarce, and can scarcely be met with beyond a very circumscribed district in Surrey.' It is interesting, in connection with the discussion as to the colour of the pure Dorking, that Columella said, speaking of the fowl already referred to, 'Let the white ones be avoided, for they are generally both tender and less vivacious, and are also not found to be prolific.' There is further evidence also that a good many of the fowls of this type which have been found in South Italy during the last hundred years have been chiefly white in plumage. The question, however, is one which is full of difficulties, and we can leave it as here stated.

* 'A Practical Treatise on Breeding, Rearing, and Fattening all Kinds of Domestic Poultry,' by Bonington Moubray, eighth edition (London, 1854), p. 124.

Moubray's work gives the following subvarieties of the improved Dorking:

(*a*) Greys: speckled, spangled.
(*b*) Reds: speckled or pied, pencilled.
(*c*) Black breasted; silver, golden, Japan.
(*d*) Cuckoo-breasted.

In Ferguson's work the Dorkings are divided into the following subvarieties: white, coloured, grey, mottled grey, spangled or speckled, brown, rubles, cuckoos, virgils, bride-laced, Japans, Norfolk-fords, grey-fords, and muffs. As to some of these we have no present knowledge, and as descriptions are not given in the works referred to, it is impossible to say what they were like, more especially as the writer suggests that they were either cross-breds, or that the names were merely local distinctions.

The present purpose is to describe the Dorking as we know it to-day. Many people are apt to exalt whatever belongs to the past, and to depreciate the present. Whilst, therefore, we may accept the statement that there were some good Dorkings fifty years ago, at the same time it must be conceded that there was a great uncertainty in type and in character. That there were first-rate birds is evident from an interesting letter which appeared in the *Live Stock Journal*, nearly thirty years ago, from Mr. A. B. Allen, of New York, who said: 'I first visited England in 1841, and in looking over the poultry there, this bird (the Dorking) struck me as being the shorthorn of barn-door fowls—that is, the best for general purposes—and I resolved to take some of them back to America with me. I accordingly selected two cocks and half a dozen pullets, and got them safely to my farm in the State of New York. They were of brilliant variegated plumage, chiefly brown-spangled and partridge colours of the darker shades, and the cocks black-breasted. They had shortish white legs, five toes, and both single and double combs; the bodies were pheasant-shaped, long, round, and full, with a deep breast, like a shorthorn ox; the head was fine, well-set on to a small, clean, graceful neck; they were thickly feathered, hardy and thrifty, excellent layers, steady sitters, and careful nurses. Well fatted, the hens weighed 6 to 7 pounds each, the cocks nine to ten pounds; when caponized they came up to 12 pounds. They were the best table fowls I ever ate. They had white skins and flesh, with little offal. So far as I have been able to ascertain, I was the first importer of the Dorking fowl into America. Subsequently many other importations followed. Some of these were of larger size than mine, but possessed the same characteristics. They varied in plumage from light or silver to dark grey, partridge colours to brown-spangled and almost black. Pure White Dorkings were also imported; but instead of being small, like bantams, as suggested by

a correspondent, they were nearly as large as the coloured, but not quite so hardy.'

Recent breeding has undoubtedly led to greater fixity of colour, and, as we see below, the number of varieties is considerably reduced. This, however, is generally the case when attention is fixed more especially upon certain types, and no attempt is made to take advantage of variations in the formation of new varieties. The main points in the Dorking are that the head shall be large; the neck thick, rather short, and with full hackle; the breast full and prominent, with long, perfectly straight breast-bone; the body large, square, and deep; the back broad and rather long, flat on the shoulders, narrowing slightly towards the stern; wings large and well carried up; tail large and flowing in the cock, carried moderately up, and with long, broad, and well-arched sickle feathers; the thighs thick and stout, but covered by the plumage; the legs short and strong, but fine in bone, and the feet large and broad, with five toes. In all the breeds of Dorkings, without exception, the legs and feet are pure white in colour, as also are the toe-nails; the beak is horn colour. Weight: males, 9 to 12 pounds; females, 7 to 10 pounds.

Varieties.—It is very difficult indeed to trace the evolution of the varieties of the Dorking, which have been reduced rather than increased in number. We have seen that in the early fifties of last century eight at least were named, but some of these are no longer to be found, and were probably then merely slight variations of three or four leading types. It will have been noticed that the Whites were not included, which is surprising, as they were known long before that time.

Dark or Coloured (*Frontispiece*). — Much controversy has arisen as to Coloured Dorkings. The editor of the 1854 edition of Moubray's 'Poultry Book' stated that the Black-breasted Dorkings were produced by crossing with Spanish, which statement is supported by the testimony that about the period named Dorkings of this variety were decidedly flatter in front than we are now accustomed to see. It would appear that the variety, as we know it to-day, was really produced by Mr. J. Douglas, then manager of the poultry-yard at Clumber, and no secret was made of the fact that a cross had been employed. Mr. Douglas selected hens of a grey and brown Dorking type; these he mated with a male imported from India, and in the last edition of Wright's 'Book of Poultry' he gave the following particulars with regard to that bird:*

'The bird was a model single-combed Dorking in all but the fifth toe, which was absent; and it is quite wrong to say that he was of the Malayan type, for there was not the least type of Malay about him; he had white legs and all the characters of the Dorking, except, as before stated, the fifth toe. I firmly believe that he must have been a cross from a bird of the Dorking tribe—taken out to India—with what cross I could not say, but certainly not the Malay.'

There can be no question that for many years the Dark Dorking was distinctly a coarser bird than we know it to-day, but the advantage of the out-crossing was considerable, and its evil influences have to a large extent been obliterated by breeding. The Dark Dorking is the largest of the race. Taking the general type already mentioned as the basis, the variations are that there is a good deal of black upon a greyish-white or steely-blue background. It has a single comb, with red earlobe, though often this is slightly tinged with white, and it has a black breast. The appearance is very striking when viewed sideways, by reason of its square shape. The Coloured Dorking is the heaviest in bone of all the different varieties, and special care requires to be taken in that direction. In flesh qualities the Dark Dorking does not compare favourably with the silver-grey, as it does not fatten so well, nor is the breast so thickly covered with muscle as might be expected. An attempt has been made to introduce a Dark Dorking with rose comb, but it has not met with popular favour.

Red.—A variety which would appear to have been commonly seen in Kent and Sussex, but which is now seldom met with, is the Red, although it has been kept by a few breeders for at least sixty years. One of these breeders, Mr. Harry Hamlin, of Edenbridge, read a paper at Edenbridge, July 29, 1899, in which he said:

'My own recollection of these beautiful fowls dates back some thirty years ago, when my father, the late Mr. Henry Hamlin, of St. Piers' Farm, Lingfield, Surrey, finding this good old breed becoming very rare, decided to carefully preserve them, which he did until his death, and which I have continued to do ever since, with the greatest pleasure, profit, and satisfaction. One great point in favour of the Red Dorkings is that they have never been crossed with Asiatic fowls, which gives coarseness of bone, thick yellow skin, and looseness of feather. In viewing a pen of Red Dorkings, the first thing that strikes us is the beautiful red hackles of the cock, and his most compact shape and general absence of all coarseness. We also notice his well-formed single comb, which is smaller than the present-day Dorking, and which, with his face, earlobes, and wattles, are of a beautiful red. We notice that his breast and tail are black; his legs are beautifully white, with some pink on the inside of shank; that the legs are very short indeed, and that he has five well-developed toes on each foot. If you take this fowl in hand you will be astonished at the weight, owing to great quantity of meat on the breast.'

* 'New Book of Poultry,' by Lewis Wright (London, 1902), p. 370.

Respecting this variety Mr. Harrison Weir writes:* 'The Red Dorkings were at one time common in Kent and Sussex, and are not a new breed, as some writing on the subject have stated. The Reds are mentioned by almost every writer for over 300 years as the *best* of all. They were quite common fifty years ago. The late Mr. Hamlin, liking their appearance, kept them pure, and those I had were the descendants of them. Kept pure by his sons—Mr. Hamlin, of Highfields, Speldhurst, Kent (selecting his more for the lacing), and Mr. Harry Hamlin, of Haxted Mill, Edenbridge (selecting his more for the richness of the red colour)—I had a very fine Black-breasted Red cock from him a short time ago. These birds are the old Kent and Sussex five-toed breed, and their crow has the ring of that we used to hear about our homesteads fifty years ago and more.'

Mr. Hamlin very emphatically repudiates the suggestion that the Red Dorking is related to the Red Sussex.

SILVER-GREY (Figs. 5 and 6). — The Silver-grey Dorking may, without depreciation of other varieties of that breed, reasonably be claimed as the handsomest of its family. Its beautiful gradations of colour in both sexes, its conformity of size and shape, the compact yet substantial build of body, the pure whiteness of legs and feet in the best specimens, offer an attractive combination. For many years the efforts of some of the most skilful breeders have been devoted to its perfection, and we may claim that it is of a higher type of excellence than ever before. We have only to read the descriptions of Dorkings as bred thirty to forty years ago to see that, whilst the birds then kept were good, they had not attained the same quality as is now to be met with. This has not been at the expense of size or flesh qualities, for the birds are as large, if not larger, and the external points have not been secured by either coarseness of meat or of bone.

Whilst the Coloured Dorking frequently attains a slightly increased weight as compared with the Silver-grey, the latter has finer flesh and bone, and thus the actual quantity of muscle found on the body is remarkably even between the two varieties. Weight is not in itself a determining factor in all cases, for the relative quantities of bone and of flesh must be taken into consideration. It is in this direction that the Silver-grey excels. The French, who are nothing if not practical, have adopted this variety in preference to any other Dorking, and it has had considerable influence in making some of the breeds, which are specially favoured across the English Channel. Size is not the first consideration with our French neighbours, who look to quality, and several of their finest races are not very large in frame, but when properly fattened are found to carry a great quantity of flesh.

* *Stockkeeper*, March, 26, 1897.

It is essentially as a table fowl that the Silver-grey Dorking excels. The fineness of bone, delicacy of flesh, and large proportion of breast-meat, win for it one of the first positions among domestic poultry. To retain these should be the aim of every breeder, who must remember that there is no antagonism between external appearance and profitable qualities if the true principles which underlie our livestock are understood. The hens are by no means to be despised as layers, and whilst they do not equal some of the non-sitters in the number of eggs produced, they are early layers—a most important quality in connection with table poultry. The eggs are large, white in shell, and of excellent flavour. There are many who prefer a Dorking egg to one from any other breed, and it is unquestionable that they are excellent. This is to be expected when we remember the flesh qualities of the fowls.

WHITE (Fig. 7).—It is generally admitted, that the original type of Dorking was chiefly white in plumage, but it was allowed practically to become extinct until resuscitated a few years ago for exhibition purposes. The White is distinctly different from those already named, in that it has a rose comb. But we find* that at one time this feature was by no means a fixed character. Further, it is scarcely so square in body as either of the two former, more of the thighs being seen. It is pure white in plumage, and upon lawns or grass it is a very beautiful bird indeed. Generally bred for ornamental purposes, it is not nearly so widely kept as the two varieties before named.

CUCKOO.—There is a variety of Dorking which has now and again attained a measure of attention, but thus far has not won much favour. In this variety the plumage has a light bluish-grey ground, each feather barred across with bands of darker grey or blue, and uniform throughout, both in cocks and hens. It is a hardy variety, and it is to be regretted that it is not more developed.

SUSSEX.

NOMENCLATURE: Sussex.
VARIETIES: Red or Brown, Light, Speckled.
CLASSIFICATION: Table.
COLOUR OF LEGS AND FEET: White.
COLOUR OF SKIN AND FLESH: White.
COLOUR OF EGG-SHELLS: Tinted.

One effect of the show system is to aggrandize the position of the more popular breeds and varieties of poultry, and to unduly depreciate those which are known to a lesser extent. Experience has shown that the efforts of a few determined breeders can, as a rule, bring any breed into prominence, and that, wanting the advertisement afforded by classes at shows and

* 'Ornamental and Domestic Poultry,' by Rev. E. S. Dixon (London, 1850), p. 279.

announcements in poultry journals, a breed either passes into oblivion or has a very limited number of supporters. But the efforts of breeders fail, or are temporary in their results, unless the race of fowls has sterling economic qualities. The 'survival of the fittest' is evident in poultry as in every other branch of life. To the lack of advocacy and push may be attributed the overshadowing of the Sussex by the Dorking, as for the last half-century it was practically unknown, except to the very few, until a few years ago, whilst the Dorking was taken in hand by skilful breeders in the early fifties, and grew in favour with the exhibition system. The Sussex fowl has now the advantage of a specialist club, founded in 1903, and, properly guided, that club should be the means of giving the breed its rightful place among our races of domestic poultry. It may be here explained that the term 'Sussex' or 'Surrey' fowl, applied to dead poultry, merely refers to the methods of fattening and shaping, and not to the breed.

Origin.—The foundation of the Sussex fowl is, like that of the Dorking, difficult to trace, and we cannot avoid the conclusion that all were originally the same. When distinctive breeding was adopted cannot be stated. But we have already seen, in connection with Dorkings, that varieties of many kinds were included under that term which are now unknown. In the early part of last century the great agriculturalist Arthur Young made a distinction between the Sussex and the Dorking, for he says:*

'The Dorking fowls, as they are called, are all raised in the Weald of Sussex; but the finest market for them is Horsham. The five-clawed breed have been considered as the best sort; this, however, is a great mistake, as it took its origin in some fowls with this peculiarity that happened to be very large and fine, which laid the foundation of what have been since called the Darking, or five-clawed fowls, and considered in other parts of England as the prime stock, but such a thing is hardly known in Sussex; it is a bastard breed. The fowls at Lord Egremont's table, of the Sussex breed, have very frequently astonished the company by their size.'

Unfortunately, Arthur Young did not describe the Sussex fowl of his day. The opinion here expressed is controverted by Bonington Moubray, as already quoted, and we are inclined to accept his views in spite of all the authority of Arthur Young's name. The evidence in the work referred to is that his information had been obtained from a breeder of Sussex fowls.

We have already seen that speckled birds were included by Moubray, Ferguson, and others, as sub-varieties of the Dorking; and other evidence would indicate that birds with plumage of that nature were widely distributed. In fact, our personal observations in the United Kingdom and many parts of the Continent of Europe are that hens with speckled brown feathering are by no means uncommon, and that as the common fowls (*Anglice*, barn-door; *French*, poule commune) usually follow the original colour, which is largely brown, many show specks or splashes of white. We have met instances supporting this view in countries as widely apart as Russia and Spain, England and Hungary. That the present-day Sussex owes something to other blood is shown by the fact that many hens lay tinted-shelled eggs.

History.—Coming to later evidence, in a little work, undated, but published in the fifties, we find it stated* that 'the varieties of Dorkings in which the fifth toe is absent are known as Sussex or Surrey fowls'; and G. Ferguson says:† 'Old Sussex or Kent fowls are closely allied to Dorkings, and bear strong affinity to them; in fact, in many instances detection is impossible. The original birds, bred in Sussex and Kent, were longer in the body, and, moreover, possessed but four claws, but being, in many instances, blended with the Dorking and crossed, may be seen with four or five in the very same clutch and hatch. . . . For weight, flesh, and early maturity, they are equal to the true Dorking, and may be regarded as no less valuable as marketable fowls. They possess their principal characteristics in feather and general appearance, there being all colours, all shades, and an innumerable diversity.'

Some time ago Mr. Harrison Weir, the well-known artist, who has been for upwards of sixty years a breeder of poultry, wrote that 'the Surrey or Sussex fowl was generally of a grey colour, often a sandy-brown, and brown, like a Black-red Game hen. I have put the colours in the order in which they were most admired, and in which size was generally to be found. They were large, strongly made, sprightly, good flyers, excellent foragers, and fair layers of large white eggs; their legs and feet were of a clear, soft-looking, pinky white; breast more broad than deep, with much flesh, and also good on the thighs, etc. They were very close in feather, thereby not looking nearly the size they actually were. Some of the breeds were bearded, and these were somewhat smaller. I never remember seeing any with top-knots. The combs were single, and the earlobe a pinky white, like the true Dorking.' Mr. Weir further adds that the majority were four-toed. No mention is made of the speckled type of fowl.

In the Report of the last Royal Commission on Agriculture, dealing with the Heathfield district of Sussex, Mr. Haviland, of Warbleton, Sussex, says:‡

* 'General View of the Agriculture of Sussex,' by Rev. Arthur Young (London, 1808), p. 392.

* 'Domestic Fowl,' by H. B. Richardson, p. 67.
† 'Prize Poultry,' by G. Ferguson (London, 1854), p. 95.
‡ London: Eyre and Spottiswoode, C. 7,623 (1895), p. 5.

'I cannot help remarking what a great pity it is that the old Sussex fowl, as it used to be found in the district around Heathfield and Warbleton some fifteen or twenty years ago, is being allowed to die out. As a table bird and as a breeder of birds for the table it was almost perfect, with its small white legs and heavy body, with good breast meat. It may not have been a prolific layer, but was very hardy, the chickens coming to maturity early, and being easy to rear in South-Eastern England, that both Dorkings and Sussex have descended from the mixed races, and that their divergences are due to selection—in short, that the five-toed fowls became what we know as Dorkings, and the four-toed the Sussex. But, further, we believe that the Surrey fowl, so called, became the former, and the latter (inclusive of the Kentish fowl) remains under its old cognomen.

Mr. Lewis Wright* speaks of the Surrey as 'a kind

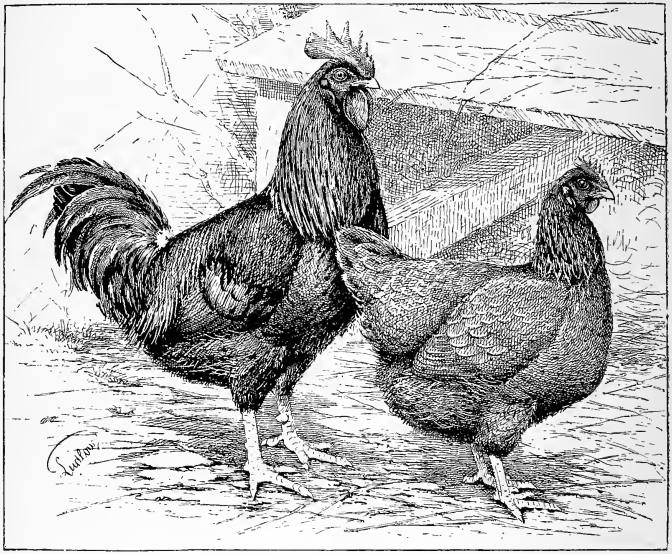


FIG. 8.—RED SUSSEX.

Bred at the College Poultry Farm, Theale.

the early months of the year. In colour, no doubt, it varied a good deal, the hens being most speckled or brown, and the cocks either grey or red, with long single comb. I have no doubt that it was to this good old breed that Sussex owed her reputation for sending good chickens to the London markets.'

Our views are that, whilst the original colour of Dorkings was largely white, the variations induced were due to mixing with the common fowl met with in of Dorkingized barn-door,' and also† mentions that the old Surrey fowl 'was one parent of the Dark Dorking.'

Economic Qualities.—Whilst Sussex fowls are not so heavy in body as Dorkings, they have the decided advantage, as in the case of the French La

* 'New Book of Poultry,' by Lewis Wright (London, 1902), p. 118.

† *Ibid.*, p. 382.

Bresse, of fattening well, laying on a large quantity of flesh by the right method of feeding. They are light in bone, a point of great importance to secure early maturity, as bone takes longer and is more costly to produce than muscle. Our experience is that they are better as layers than the Dorking, but do not excel in that direction, except in so far as they lay early—a most important point where chicken-breeding is in view. The flesh is beautifully white, juicy, and excellent in flavour. That fact, combined with the white legs and feet, makes them specially desirable for the production of chickens for market, but they should be well hung. They are hardy and easily reared.

Description.—Pre-eminently bred for meat properties, the Sussex is a deep-bodied bird, but does not give the same appearance of size as the Dorking, more especially in the hens, either in length, depth, or width of body. But it is lighter in bone, and does not carry so much feather, nor is it so large in comb. The breast is broad in front, and should be carried well forward, the keel, and therefore the body, being deep. The shoulders are wide, the back broad and flat, tapering somewhat towards the posterior. The head is medium in size, with short, strong, and curved beak, and surmounted by a medium single comb, erect in both sexes; eye full and bright; face, comb, wattles, and earlobes red. The neck is medium in length and gracefully curved, with fairly full hackle. The tail is medium in size, the wings carried closely. Legs and thighs are stout, but not heavy, short and wide apart, with four toes on each foot. The legs, feet, and toenails are white, and the skin white, clear, and fine in texture.

Varieties.—The Sussex Poultry Club has recognised the three colours named below, but some breeders regard only the red or brown and the speckled as the true Sussex.

Red or Brown (Fig. 8).—Cock: The plumage is dark or chestnut-brown, with greater depth of colour on the saddle and wing-bow, which should be glossy; the neck hackle is bright brown, striped with black; the wings a rich dark brown, with black flights; tail black; wing-coverts a dark brown, changing to black at tips. Hen: The neck-hackle is dark brown, striped with black; wings brown with black flights; tail black; body brown. We do not find it desirable to pay the same attention to coloration of the hen as of the male, so long as she is bred from true stock.

Light.—Both sexes: Neck-hackle white, stripe with black; wings white, with black in flights; tail black; head, tail-coverts, and body pure white.

Speckled.—Cock: Head, neck-hackle, and tail-coverts rich reddish-brown, striped with black and tipped with white; wing and wing-bow red; tail white and black; breast black, each feather tipped with white; remainder of plumage black with a slight admixture of brown. Hen: Body black and brown, as evenly speckled with white as possible; other parts as in cock.

ENGLISH GAME FOWL.

Nomenclature: *English*, Game; *French*, Combattants Anglais, or Race de Combat Anglaise; *German*, Englische Kampfer; *Dutch*, Engelsch Vechthoenders; *Italian*, Grande Combattente; *Spanish*, Combatiente Inglis; *Danish*, Kamphons; *Hungarian*, Közönséges.

Varieties: Black-breasted Red, Bright Red, Brown-red, Blue-red, Pile, Yellow Duckwing, Silver Duckwing, White, Black, Spangled.

Classification: Table.

Colour of Legs and Feet: Various.

Colour of Skin and Flesh: Chiefly white, in a few cases cream.

Colour of Egg-shells: Tinted.

It is a very interesting study, but one which has never yet received a full measure of consideration, as to the influence of pursuits, which no longer are met with to the same extent as in former centuries, upon modern life, and a great amount of space could be devoted to this study. We are to a large extent the inheritors of influences which, having fulfilled their purpose, have passed into oblivion. Strife and fighting are the normal condition of man. The world's history is one of constant turmoil and conflict. To-day we see the spectacle of nations armed to the teeth, ready for war when called upon to show their prowess. Deadly though modern wars have become, the intervals of peace are longer than ever before, by reason of the fact that the results, even to the victor, are increasingly disastrous. In olden times war was the regular, peace the exceptional, state of things, and to have a seven years' war, as even so recently as 100 years ago, is now almost an impossibility. No nation could provide sufficient 'food for powder' for such a conflict. The story of all countries is an exemplification of that inexorable law of 'survival of the fittest'—a law which is potent now as ever, though in another direction. Amongst the nomads only he could expect to live who was able to defend his life and property. Is not this seen in the internecine conflicts of Britain, the frontier struggles of America, and the defensive measures of civilized communities on the threshold of 'Darkest Africa'? The Pele Towers to be found near our Scottish border speak volubly as to a time when life was a succession of raids and forays, of dread alarms and savage incursions. Under such conditions courage could not help being the principal virtue. A 'mighty man of war' became the idol of his age, his deeds the emulation of every rising youth. Nor is this spirit dead. In most nations a successful General receives the greatest honours his fellows can accord to him.

What wonder, then, that in days when fighting was the only defence of men and nations, everything was

sought for that would stimulate courage and bravery. A man's environment is generally the expression of his nature, and thus the amusements of savages must be brutal to civilized people. If it were not so there would be no pleasure in them. Had we lived in ancient Rome we should have joined in the excited mob who witnessed the gladiatorial strife; had we lived in England five centuries ago we should have felt our blood beat fast to see the tournaments in which brave knights bit the dust; were we Spaniards now we might think the bloodthirsty and cruel bull-fighting the finest of all sports. What we desire to show is that we must not regard the practice of cock-fighting, as followed by our fathers, from our own standpoint. To-day it is rightly condemned by all civilized and cultivated people, except, perhaps, where ancestral blood exercises its prepotency, but brute force, of which this sport is simply an expression, is no longer the necessity as was once the case.

Origin.—There appears to be little doubt that one of the first objects of domestication in connection with poultry was not to supply man with food, but rather to meet the desire for recreation and to fulfil his craving for sport in one form or another. Whilst, therefore, we may by reason of our advance in civilization and refinement in nature no longer follow the lines of our forefathers, at the same time we must acknowledge our indebtedness to them in various directions. As a consequence, therefore, of the fact that the Game fowl is directly descended from the *Gallus Ferrugineus* (or *Bankiva*), we should expect that it would most nearly resemble the original type, as it was bred for fighting purposes in Eastern and Northern Asia, which is the habitat of the wild progenitor. Such changes as occurred were the result of breeding to develop the combative instinct. The late Charles Darwin presents a large amount of evidence in support, and says:* 'From the extremely close resemblance in colour, external structure, and especially in voice, between *Gallus Bankiva* and the Game fowl; from their fertility, as far as this has been ascertained, when crossed; from the possibility of the wild species being tamed, and from its varying in the wild state, we may confidently look at it as the parent of the most typical of all the domestic breeds, namely, the Game fowl.' One difficulty, however, which presents itself is that the sport of cock-fighting, and therefore fowls, was known to the aboriginal inhabitants of North and South America; but, in the absence of authoritative records, it is possible that the Spaniards, soon after the discovery of America, conveyed fowls across the Atlantic, and that they were bred on the Western Continent for some time before careful and reliable observations were made as to the fauna of the Western Hemisphere.

* 'Variation of Animals and Plants under Domestication,' by Charles Darwin, M.A., F.R.S. (ed. 1885), vol. i., p. 248.

History.—As to the origin of cock-fighting as a sport, for the breed cannot be regarded apart therefrom, that need not delay us. Given, however, the spirit to which reference has been made, and that animals and birds in a state of nature must be possessed of great powers of defence, it will be at once evident that pugilistic tendencies were developed to a considerable extent, and hence the material for exercising such a sport as cock-fighting was at hand. These tendencies did much to popularize cock-fighting, and to bring about that desire for improvement which has led to great modifications in the fowls themselves. Domestication has not entirely destroyed the desire for fighting, as can be seen in every poultry-yard. It is easy to imagine how the presence of a couple of cocks around the dwelling or tent of Indian or Persian would offer the opportunity of a main without effort or intent. Opportunity is responsible for many pursuits, and frequently stimulates desire. In this case opportunity and desire joined themselves without much effort; all that was necessary for primitive man was to select those birds which showed the greatest courage and fighting qualities, breeding from them so as to increase and perpetuate these characteristics. The general influence of cock-fighting in the domestication and distribution of fowls is fully referred to in Chapters I. and II.

When the diversion of cock-fighting came into Western Europe it is impossible to determine, or how it originated, but it is probable that it was due to the natural instinct of the birds themselves. Mr. Pegge, in the 'Archæologia,' states his inability to discover any references showing it to be a recognised sport before the time of William Fitz-Stephen, who wrote the life of Archbishop Becket some time during the reign of Henry II. In this work cocking is spoken of as the sport of school-boys on Shrove Tuesday, called 'Camilvaria,' in which the master was compelled to allow the fight, receiving his fees for the privilege. From that time onward it entered more or less into our English national sports. Upon this point Rees* says that 'by some cock-fighting has been called "a Royal diversion," and much encouraged both by Henry VIII. and James I.; but it was forbidden by one of the Acts of Oliver Cromwell, March 31, 1654. There are no documents that we are acquainted with to inform us in what state the Act of fighting-cocks existed prior to the reign of Henry VIII., who, it is supposed, founded the celebrated Cockpit at Westminster, afterward renewed and encouraged by Charles II., whose pile-cocks, the introduction of this monarch, are in high estimation amongst breeders at this day. From that period annual mains have been fought at the Royal Cockpit at Westminster to the present time.'

Gervasse Markham devoted one section of his work on 'The English Husbandman' to 'The Fighting-

* 'Rees' 'English Encyclopædia,' 1815.

Cocke,' which was also published in separate form,* and this quaint description, penned nearly three centuries ago, is well worthy of reproduction. In it he says :

'To speak then as to the choyce of the fighting-cocke, you shall understand that the best characters you can observe in him are the shape, colour, courage, and sharpe heele; for his shape the middle and indifferent size is ever looked for, for they be ever matchable, strong, nimble, and ready for your pleasures, whereas the huge one (which we term the turne-pocke) is ever hard to find an equal, lubberly, and affording small pleasure in his battell; and so the exceeding little cocke is as hard to match, and is commonly weake and tedious in his manner of fighting. Hee would bee of a proud and upright shape, with a small head, like unto a Spar-hawke, a quick, large eye, and a strong, big crookt beake, and in colour suitable to the plume of his feathers, as black, yellow, or reddish. The beame of his leg would be very strong, and, according to his Plome, blew, grey, or yellow; his spurs long, rough, and sharpe, a little bending and looking inward. For his colour the grey pyle, the yellow pyle, or the red with the black breast, is esteemed the best; the pyde is not so good, and the white and dunne are the worst. If hee be redde about the head, like scarlet, it is a signe of sicknesse and faintnesse. For his courage, you shall observe it in his walk, by his treading, and the pride of his going, and in the pen by his oft crowing. For the sharpness of his heele, or as the cocke-masters call it, the narrow heele, it is only seen in his fighting, for that cocke is said to be sharpe-heeld or narrow-heeld, which every time he useth himself, and draweth bloode of his adversary, guilding (as they tearme it) his spurres in blood, and threatening at every blow to put an end to the battell. And these Cockes are surely of great estimation, for the best cocke-masters are of opinion that a sharpe-heeld Cocke, though he be a little false, is much better than the truest Cocke which hath a full heele, and hitteth seldome, for though the one fight long he seldome wounds, and the other, though he will not endure the uttermost hewing, yet he make a quiet dispatch of his businesse, for every blow puts his adversary in danger. But that Cocke which is both assuredly hard, and also very sharpe-heeld, hee is to be esteemed, and is of the most account above all others, and therefore in your generall election, chuse him which is of strong shape, good colour, true valour, and of a most sharpe and ready heele.'

Buffon and other of the older naturalists do not throw much light on the different varieties of the Game fowl, and for these particulars we shall have to look elsewhere. Moubray deals generally with it, and makes a defence of cock-fighting on the ground that the birds enjoy the sport, for ''tis their nature to.' He even defends spurs, because they 'shorten the period of their sufferings.' He says further* that 'their flesh is of the most beautiful white, and superior to that of all other breeds of domestic fowls for richness and delicacy of flavour; but the extreme difficulty of rearing the chickens—for their natural pugnacity of disposition shows itself at the earliest possible period—deters most breeders, excepting those who breed for the pit. I have many times had whole broods, scarcely feathered, stone-blind from fighting, to the very smallest individuals, the rival couples moping in corners, and renewing their battles on obtaining the first ray of light.'

The same writer quotes a very interesting statement as to the origin of the custom of throwing at cocks on Shrove Tuesday, that may be true, but requires further confirmation, which up to the present we have not found. This states that whilst the Danes were masters of England, and lorded it over the natives, the inhabitants of a certain city, grown weary of slavery, had formed a secret conspiracy to murder their masters in one bloody night, when twelve men had undertaken to enter the town hall by stratagem, and, seizing the arms, to surprise the guard which kept it, at which time their fellows, upon a given signal, were to come out of their houses, and murder all opposers; but while they were putting this plan in execution, the unusual crowing and fluttering of the cocks near the place which they attempted to enter discovered and frustrated their design, upon which the Danes became so enraged that they redoubled their cruelty, exercising still greater severity over the English. Soon after, however, the English, being freed from the Danish yoke, instituted the custom of throwing at cocks on Shrove Tuesday, the day of their disappointment, from a stupid and barbarous passion of revenge against the innocent cause of their misfortune, instead of admiring the natural vigilance of the birds. This infamous sport, although at first only practised in one city, in process of time became a national diversion.

So far as Western Europe and North America are concerned, it may be taken as a settled fact that our Game fowls owe their origin and their prowess largely, if not entirely, to Asia. In the first place, fowls were kept for fighting; they were probably introduced as part of the domestic animals of one or other of our conquerors, and would fight as do members of our poultry-yards to-day. If we are right in assuming that these conflicts would be watched with interest, and the birds encouraged in their conflicts, the next step would be to obtain fowls bred for this purpose alone so soon as they heard of them; and the Roman invasion afforded every opportunity for this development.

* 'The Fighting-Cocke,' by Gervasse Markham (1615).

* 'A Practical Treatise on Domestic Poultry,' by Bonington Moubray, fifth edition (London, 1824), pp. 12-13.

It has already been shown that cock-fighting has been for long centuries a great sport in India and Southern Asia generally, and much of our best blood has emanated from the great dependency. A famous old cocker, Mr. John Harris, of Liskeard, Cornwall, some time ago wrote a valuable letter* on the 'True Indian Game,' which must not be confounded with that seen under this title in our shows, for the latter should rightly be called the Cornish Game. Speaking of it, he says:

'The Indian Game cock has been known to Englishmen ever since they have had communication with India. There is a tradition that some cocks from India were fought in the Royal Pit, Newmarket, before King Charles II., to whom they had been sent as presents; and that several were fought and beaten in a main at Market Drayton about 140 years ago, that had been selected and sent home by the friends of Clive. And a few years earlier Reed, animal painter to His Majesty King George, painted the portraits of an Indian and an English cock doing battle. Another painting by a native artist was brought to this country, representing two cocks, belonging to rival Rajahs, fighting for the large stake of £10,000. The fame of these cocks induced Colonel Mordaunt to take a large number of English cocks out to India, so as to settle the question of superiority. A large engraving of this main, containing portraits of many celebrated sportsmen, both English and native, is in possession of the Game Cock Club. About eighty years ago one of the keenest cockers then living brought home several birds, selected from the best strains he had seen fight in India, which were minutely described by the sporting press, accompanied by a print, and represented as quite distinct from the worthless Chittagongs and Malay breed. Lord Cholmondeley, Admiral Rous, Lieutenant Lewis, and Colonel Gilbert, were also the recipients of very good birds from India, many of which came into my hands; and probably no better birds were ever sent to England than those selected by my friends Captains Dickson and Astley, and occasionally a few are exhibited in the variety class at shows, many of which appear to have been selected for feather and appearance in preference to purity of breed and sterling game qualities. Exhibitors, probably from an idea that they are some new or fancy breed, frequently call them Aseels. Surely the English language is sufficiently comprehensive and explicit even for the fads and whims of the fancier, without introducing the Indian dialect. The well-known term of Indian Game has always been used by Englishmen both in England and India, in contradistinction to English Game, frequently pitted against each other in the palmy days of the Sod in England, and occasionally in India. These contests failed to prove any superiority of the one breed over the other, as each almost invariably won in their native country, for the simple reason that the long voyage and change of climate had such a depressing effect on the migrants that they were half beaten before being brought into the pit. Besides, the Indian Game cock is bred solely for courage and endurance, the grand requisites for which are great strength and deep game, whilst the English Game is bred for sudden death. He must carry a deadly heel, be quick and wary, for that cock is ever the best in the English pit that wins quickest. Cocks bred from a cross of Indian and English birds are as game as possible, but I have never known it improve either breed to the extent that might reasonably be expected. Some time after Captain Astley's last return from India a great main was fought, North *v.* South. I was not present, but meeting Moss, the clever cock-setter, shortly afterwards at Manchester, I asked the reason of his getting beaten so easily, and he replied: "Couldn't help it; those half-bred Indians could not fight fast enough to keep themselves warm." Again, shortly before he returned to India, a main was made for £1,000, one side fighting birds crossed with Indian Game, the other pure-bred English Game. The former lost six out of the first eight battles fought, when a gentleman who breeds as good cocks as anyone in England made me this observation concerning the Indian Game cross: "They are very game, and can fight for endurance, but they cannot kill," an opinion which I fully endorse.'

From these facts it is evident that whilst we may have originally had valuable Game cocks from the Far East, centuries of skilful breeding devoted to the English Game cock, and for the purposes of the cock-pit, have made that fowl one of the best fighters in the world. What the influence since cock-fighting was made illegal has been will be considered later on.

Many indications are yet to be found showing how largely this pastime entered into our English life, for various places are named in respect to their connection therewith. In London we have 'Cockspur Street,' 'Cock Lane,' etc. When it is remembered that it was a national sport, no surprise at this need be expressed. The most remarkable connection was with regard to school life. As already mentioned, schoolmasters received a regular fee, a tax for permitting cock-fighting in the schoolhouse on Shrove Tuesday. This was the case as far back as the reign of Henry II. As late as 1790, the income of the schoolmaster of Applecross in Ross-shire, Scotland, was made up by salary, fees, and cock-fight dues, and Hugh Millar, in 'My Schools and Schoolmasters,' records the yearly cock-fights in the grammar school of Cromarty, about the year 1812. In a reference to Cartmel, near Grange-over-Sands (North Lancashire), given in 'The History of Furness,' it is stated that 'A curious custom formerly observed at this, as well as other grammar schools, was the gratuitous payment which was expected from all

* *Fancier's Gazette*, April 15, 1892.

the scholars at Shrovetide. This gratuity differed in amount according to the social position of the parents of the pupil, and ranged, Mr. Baines tells us, at the beginning of the nineteenth century from 2s. 6d. to £5. These payments were called cock-pence, and probably originated in the barbarous amusement of cock-fighting and cock-throwing which was indulged in on Shrove Tuesday.'

It seems to have been a custom in all the old grammar schools for each boy to make a payment of one penny to the master for the privilege of cock-fighting on that day. The boys brought Game cocks to school, and amused themselves the whole morning in watching their encounters. In Scotland the master claimed the dead bird as his perquisite. The scenes enacted were brutal in the extreme, and must have had an injurious effect upon the minds of these lads. Perhaps this accounts for the reason why cocking has been so hard dying in the North-West of England, or wherever the custom referred to was in vogue.

The final Act of Parliament suppressing cock-fighting as a recognised sport was passed in 1849, and provided that a penalty of £5 may be levied on any person keeping fighting-cocks, letting a cockpit, or otherwise connecting himself with cock-fighting, for every day that he shall so act, and this penalty is enforced whenever captures are made. This date is important, as it practically is that of the beginning of our modern show system, the first exhibition being held about 1848, and it marks an era in the history of the Game fowl.

Before proceeding to trace the influence of shows upon the Game fowl, it is necessary to learn what were the varieties known to cock-fighters in former days. Of course, it must be granted that colour would not occupy the same position as is requisite for the show-pen, for a good fighter could not be of a bad colour, any more than a good horse. Still, it will be found that colour was regarded as a sign of purity of breeding. For instance, Gervasse Markham (1615), as already quoted, says: 'For his colour the grey pyle, the yellow pyle, or the red with the black breast, is esteemed the best; the pyde is not so good, and the white and dunne are the worst.' Upon this point many other references could be given, but these are needless previous to 100 years ago.

In a work published in 1793, a copy of which is in the British Museum, and 'Humbly Inscribed to those Gentlemen who are AMATEURS of the GAME COCK, that Prodigy of British Valour, by a Gentleman who has been in the habit of Breeding these eight-and-twenty years,' as to the varieties the writer says:

'The variety of cocks bred in this kingdom, and the opinions of men being as various, it is difficult to say what sort to recommend in preference to any other; for in one part of the country they are partial to piles, in others to

Black-red,	Cuckoos,
Silver Black-breasted	Gingers,
Ducks,	Birchen Ducks,
Dark Greys,	Mealy Greys,
Spangles,	Red Duns,
Blacks,	Furnaces,
Polecats,	Custards,

in all of which good birds are to be found. But we are all too prone to change, and our choice is frequently attracted to make trial of cocks which are every now and then exhibited to our view, without any regard to similarity of feather, constitution, or any other concomitant to make the cross uniform; for frequently reds are put to greys, birchens to piles, and all contraries imaginable, which produce the many-coloured fowls you see in every match.' He gives the names of about fifteen other varieties, in many cases slightly different from those already mentioned.

In 1814 was published a work on 'The Cocker,' by W. Sketchley, Gent.,* which deals very exhaustively with the subject, and was evidently the work of a man who knew his subject thoroughly. In this we find a very complete list of the different varieties of Game fowls. In addition to those mentioned in the book published in 1793, there are several other colours, namely, duns and smoky duns, and the author expresses himself as to crossing as follows:

'It has always been a matter of surprise to me to see the wonderful avidity, even in experienced breeders, in expressing a wish of obtaining a single cock for a day's fight, that has exhibited something out of the common routine of play, in order to breed from, when I have been sensible of the impropriety of the cross he was destined to make—in fact, with hens that were as dissimilar in feather and other necessary similarities as possible. If uniformity in their general appearance is absolutely necessary in forming a regular breed, I cannot help expressing my wonder at well-informed men running into an error so fatal to the welfare of judicious breeding, and which must convince a reflecting mind that from such unnatural, or at least incompatible, crosses we are indebted to the public for such a strange medley of colours as we see in every main, when a few years' attention would exhibit cocks of a very different stamp.'

He then goes on to detail the 'incongruous' mixtures, and carefully points out how they have been produced, offering suggestions as to the true system to be adopted in breeding.

The early editions of Moubray's 'Practical Treatise' do not detail the different varieties of the Game fowl, but in that published in 1854 a long list is given. Various other works could be named, but these only

* 'The Cocker,' by W. Sketchley, Gent. (Burton-on-Trent, 1814), pp. 16-17.

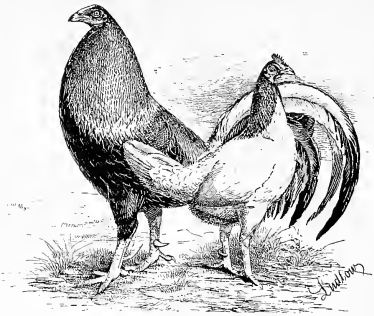


FIG. 9.—OLD ENGLISH GAME.

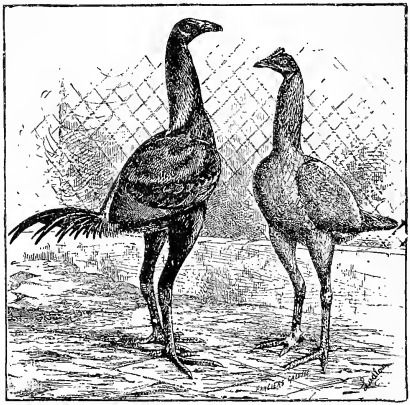


FIG. 10.—MODERN SHOW GAME.

give reproductions of Sketchley's tables, and do not call for special mention. By 1848, the year, we believe, in which the first poultry show was held, many of the minor varieties appear to have been weeded out or to have lost their prominence, for in Dixon's book * only those subjoined are mentioned :

The Furness Game fowl.
Cheshire Piles.
Streaky-breasted Red Piles.
White Game.
Black-breasted Reds (Derby).

But this list is evidently incomplete, for the author throughout his work only refers to the more prominent varieties.

The first Birmingham Show was opened December 9, 1851, at which there appears to have been a good display of Game fowls, and this is still regarded as the great Game show of the year. Only two classes were provided, and in a report of the classes before us it is stated that there were exhibited Worcestershire Piles, Black-breasted Reds, Duckwing Greys, Birchen Greys, and Blacks. The year following 164 pens of Game were displayed at this Midland exhibition. In 1853 the First Metropolitan Poultry Show was held, opening at the Baker Street Bazaar on January 11, at which seven classes were provided, but with only forty-eight entries. The classes were for (1) Whites and Piles ; (2) Black-breasted and other Reds ; (3) Blacks and Brassy-winged, except Greys ; and (4) Duckwings and other Greys and Blues.

The first attempt to deal at all exhaustively with domestic poultry was the work entitled 'The Poultry Book,' by Messrs. Wingfield and Johnson ; and though this is manifestly incomplete in many points, being primarily written to advance the interests of the Shanghai fowls, yet it offers material help to the student of this subject.†

It may be here mentioned that 'The Poultry Book, published under Mr. W. B. Tegetmeier's name some years later, is practically a revised and enlarged edition of this book. We believe this fact is mentioned in the first edition, issued in 1867, but the second edition, published in 1873, does not bear any explanation of its origin on the title-page or prefaces. The authors of the first-named work, speaking of the characteristics of the Game fowl, say :

'When we approach the question of colour, our task becomes more intricate [than that of general appearance and style], since, from the anxiety to avoid any deterioration either in figure or courage, crosses have been constantly resorted to. But these intermarriages not having been always regulated with sufficient judgment, so as to retain the peculiar points and colours of the different varieties, a multiplicity of subvarieties present themselves to our notice, many of which are still further complicated by the use of synonyms of merely local authority.'

After the abolition of cock-fighting, and with the advent of exhibitions, came a change which has had serious results. Gradually breeding for the show-pen completely altered the type by lengthening the neck and leg, refining the head, shortening the hackles and tail, and reducing the depth of body in seeking for what is termed 'reach,' until the modern show Game became, except in colour, as divergent from the original as the shire horse is from the hackney. The process was comparatively rapid. In forty years (from 1850 to 1890) the points which had characterized the fighting Game had given place to others of an ornamental nature, with marked beauties of plumage, but useless either for the cockpit or food-supply. The old Game needed powerful wings and limbs, hence muscular development was necessarily great, and as the wings are worked by the muscle lying upon what we call the breast, increase of power meant greater meat properties. The old cockers unconsciously made the Game fowl one of the finest birds for table purposes, whereas their successors weakened these qualities in seeking for the merely ornamental. When cock-fighting was suppressed, when the birds were no longer kept in exercise, and breeding was general rather than special, modifications were certain to follow, but exhibitors directed these changes into forms which would otherwise not have been seen. The show Game is no longer of service for practical purposes, for which reason, as our object is economical, we recommend those who desire to utilize the undoubted fine qualities of the English Game, especially in crossing, to select the older type, leaving the modern Game to those who breed for the show-pen. Figs. 9 and 10 represent the Old English and the Modern Show Game respectively.

Fortunately, all the English Game had not been spoiled. In many parts of the country—more especially in Cornwall and Cumberland, where cock-fighting was surreptitiously carried on—breeders retained the old type, preserving them in their original purity. In 1883 classes were provided for Old English Game fowls at shows in Cumberland, and ultimately breeders were banded together in the Old English Game Club, to which we owe the preservation of what may be regarded as the most typical British race of poultry.

Economic Qualities.—It cannot be claimed that the English Game has ever attained a large measure of popularity, nor is it likely to do so, owing to its pugnacious nature. Cockerels and pullets will fight when quite young, and the ordinary poultry-keeper prefers a breed which gives less trouble in that direction.

* 'Ornamental and Domestic Poultry,' by Rev. E. S. Dixon, M.A. (London, 1848), pp. 333-336.

† 'The Poultry Book,' by the Rev. W. Wingfield and G. W. Johnson (London, 1853), p. 141.

Mr. Herbert Atkinson suggests* that 'this inherent quarrelsome disposition, so characteristic of the breed, renders it unsuitable for those who have only a confined space, or desire to keep a large number of fowls, and confinement does not suit them; the chickens become weakly, and the hens become indifferent layers. The Old English Game is essentially the breed for the country gentleman, who desires fowls and eggs for his own table.' But there is another reason which has prevented their wider adoption, especially for exhibition—namely, the custom of dubbing, or cutting off the comb and wattles. Dubbing was a necessity for the cockpit, but has no justification in these days. As our purpose is essentially practical, it is not requisite that we should discuss the ethics of the practice to which reference has been made.

'Old English Game,' says Mr. Atkinson,† 'stand in front of any variety whatever as table fowls, carrying, as they do, the largest proportion of white, delicate, and nutritious meat, with the smallest amount of waste, offal, or bone. They carry more breast meat in proportion to their size than any other fowl, and, killed from a good run, they resemble the pheasant in flavour more than other fowls. Many strains of Game are excellent layers of good-sized and beautifully-flavoured eggs, Hennies, Black-breasted Reds, and Piles standing first in this respect. If checked when wanting to sit, they will continue laying for some time. I have had Game hens lay over sixty eggs before becoming broody, and continue laying throughout the greater part of the year. As sitters and mothers they are invaluable: quiet on their eggs, close sitters, regular in leaving and returning to their nest, and when the brood is hatched they are the best of mothers, not trampling and killing their chickens by treading them under foot, as is often the case with large and heavy breeds; whilst against cats, vermin, or, indeed, any enemy, they will defend them to the last. Another recommendation is that, according to their size and weight, they have smaller appetites, and can subsist on less food than any variety; indeed, on a good run they will almost get their own living, foraging everywhere, not standing idly about as in the case of the Asiatic breeds, but ever moving. They are very valuable for an unprotected place, whether it be a wild run or near a road or a stable-yard, both from their activity in avoiding danger themselves, and their courage in defending their little ones. They will not bear fattening, but are always full of meat if on a good range, and with suitable food they are plump and meaty from little chickens, while their quick growth and hardihood are two other valuable points not to be lost sight of. They will roost in the trees throughout the winter with impunity; indeed, they never do so well, nor show such splendid condition and plumage, as when they roost in the trees or open sheds, etc., all the year round.'

The great value of this breed is for crossing, and if mated with soft-fleshed races, such as the Dorking or the Buff Orpington, the progeny is unsurpassable in flesh qualities.

Description.—In body the Old English Game is broad in breast, full and straight, of medium length, firm and muscular, well rounded on the sides, wide at the shoulders, and tapering well to the tail; the neck is rather long, powerful, especially near the shoulders, and well covered with an abundance of long hackle feathers, well on to the shoulders; the head is narrow, medium in length, beak strong and slightly curved, eyes full, bright, and expressive; the thighs are short and stout, with rather long shanks, substantial in bone, flat and unfeathered; toes long and well spread, so that the bird stands flat on the ground; the wings are long, and very strong; the tail full, well expanded, nearly upright, with abundant, broad, and well-curved sickles, the saddle-hackle also full. The appearance is that of a rather large, round, full-fronted, muscular, but perfectly symmetrical fowl, active and sprightly. Weight: males, 7 to 9 pounds; females, 5 to 7 pounds.

Varieties.—The varieties of English Game are very numerous, and it would require a large amount of space to deal with these in detail. For the reason that the breed is chiefly to be recommended for crossing purposes, it is unnecessary that we should do more than briefly mention the principal colours.

Black-breasted Red (Fig. 9).—Those with white legs are sometimes called Derby Reds, as they were largely bred at Knowsley. The cocks have deep black breast, thighs, and tail; dark golden-red neck and saddle-hackle; deep red back and wings, the latter with a dark blue bar. Some strains of Black-breasted Reds have yellow legs, and others willow legs. They are variations of the first named, but similar in other respects.

Brown-breasted Red.—In these the cocks are brown, laced or mottled, with light shades on breast and thighs; dark rich brown on back and shoulders; rich brown, streaked with black, on neck and saddle hackles; tail and wings black; legs dark willow or black.

Pile.—One of the prettiest varieties; breast, thighs, and tail white; back deep red; shoulders red; wings (when closed) bay; neck and saddle hackle orange-red and chestnut-red; legs white, yellow, or willow.

Duckwing.—There are two colours, yellow and silver. In both, cocks on breast, thighs, and tail are black; back, in yellow, deep gold; in silver, silver white; neck and saddle hackles, in yellow, straw yellow; in silver, silver-white; wings, in yellows, copper-maroon with a green-black bar; in silvers,

* 'New Book of Poultry' (London, 1902), p. 350.
† 'The Old English Game Fowl' (London, 1891), pp. 55-56.

shoulders and wing-bows silver-white with a bar of steel-blue; legs yellow, willow, olive, or blue.

WHITE.—Plumage pure white; legs white or yellow.

BLACK.—Plumage glossy black; legs black or dark.

SPANGLED.—Body colour either black, red, blue, or buff, evenly spangled with white; legs willow, yellow, or black.

In addition to the above named are Cuckoos, Hennies, Muffs, and Tassells. Full standards will be found in 'The Old English Game Fowl,' by Mr. Herbert Atkinson, already referred to, and in the 'Poultry Club Standards.'*

INDIAN (CORNISH) GAME.

NOMENCLATURE: *English*, Indian Game; *French*, Combattants des Indes; *German*, Indische Kampfer; *Dutch*, Indische Vechthoenders; *Italian*, Indiana; *Spanish*, Gran Combatienta de Indias; *Danish*, Indische Kamphons; *Hungarian*, Indiai.
VARIETY: One.
CLASSIFICATION: Table.
COLOUR OF FLESH AND SKIN: Yellow.
COLOUR OF LEGS: Yellow.
COLOUR OF EGG-SHELLS: Dark brown.

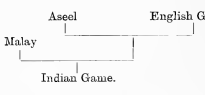
The breed which is commonly called Indian Game owes its present form to the county of Cornwall, where it is largely bred, more especially in the eastern half of the county. Around Launceston, Callington, Liskeard, and Bodmin, the majority of chickens marketed are of this type; and in West Devon, as in Cornwall, Cornish Game fowls are most in favour for table purposes, commanding higher prices than the white, softer-fleshed races. And the colour of flesh explains why Indian Game were so warmly welcomed in America, where yellow flesh is regarded as fuller in flavour and richer than paler-hued breeds. The name, however, is a mistake, as these fowls are not directly Indian, nor are they, whatever they may have been at first, Game in nature. A truer designation would be Cornish fowls, but it is too late to secure so desirable an alteration.

Origin.—Statements as to the origin of the Cornish Game are very conflicting. At one time it was suggested that the breed was a direct importation from the East Indies; the only evidence of which we have met with was by 'Game Cock' (Mr. John Harris, of Liskeard), who said:† 'A working man, who had been in the army and had seen service in India, visiting my yards, and on being shown the pens of Indian Game, he said, "Why, I've seen lots of those in India, and the natives fight them."' The consensus of opinion, however, is that, whilst undoubtedly the breed owes much to Asiatic influence, it was produced in Cornwall.

Mr. C. F. Montresor, several years ago, writing upon the Aseel, another Asiatic breed, but of true Game nature, said that Aseel is the name by which that breed is known and styled in India, 'and has been adopted in England for some years in order to distinguish it from that which is designated "Indian Game" (a breed not known to the natives of India), and originated in England by the late Sir Walter Raleigh Gilbert upwards of sixty years since, when he imported from India some red "Aseel" into Cornwall, and there crossed them with the Derby Blackreds. Sir Walter (then General) Gilbert personally gave me this information in 1846.'

But the Indian Game of fifty years ago were very different from what they are to-day. Mr. Harrison Weir quotes* a long letter from a Cornish correspondent in proof of the claim that the breed is not 'Game,' referring to the older type, which is of no moment, as they were not bred for the cockpit. About the early seventies a cross was introduced, evidently of Malay, or what Mr. Lewis Wright† calls 'Pheasant Malay,' for he says: 'From this cross was derived a solid black breast and darker colour in the cocks, and greater richness of colour and more iridescence of the lacing in the hens; and we suspect the double lacing also, which we never remember to have seen before. What this Pheasant Malay itself really was we are at the present date unable to say.' The following table will give the composition of the breed:

DESCENT OF THE INDIAN (CORNISH) GAME.



History.—Mr. Harrison Weir states‡ that Indian Game were exhibited at the Crystal Palace and other shows in 1858-1859, but it was practically unknown outside Devon and Cornwall for nearly twenty years after that date. Our attention was first called to the breed about 1878 by the late Mr. James Dixon, who spoke enthusiastically about its value for crossing to produce table poultry, but Mr. Lewis Wright had seen a fine display at the Plymouth Show of 1870. Breeders were, however, slow in recognising the value of the breed until about 1886, when Mr. John Martin, Mr. James Dixon, and others, in the *Live Stock Journal*, called special attention to the breed, and a year later Mr. W. B. Tegetmeier, in the *Field*, advocated the Indian Game and Dorking cross for its meat properties. In the same year (1887) the breed was introduced into the United States. It is not too much to say that the wider dissemination of the Indian Game

* London, 1901, pp. 50-53.
† *Stockkeeper*, May 7, 1886.

* 'Our Poultry,' by Harrison Weir, F.R.H.S. (London, 1903), vol. i., p. 255.
† 'New Book of Poultry' (London, 1902), p. 333.
‡ 'Our Poultry,' vol. i., p. 250.

has been almost entirely due to its merits for crossing with soft-fleshed races, and in the dead-poultry shows the major part of the prizes have fallen to such crosses when exhibited.

Economic Qualities.—The Indian Game fowl is one of those races which as a pure breed is not to be recommended for general adoption. In the first place, it is a heavy-boned fowl, slow in growth, and making too big a frame in relation to the quantity of meat carried thereon to be profitable for marketing purposes. What we want in table poultry is a lighter-boned bird, quick in growth, and carrying a considerable amount of flesh upon the frame. The most earnest advocate of the Indian Game could not possibly claim these qualities for the breed, and it is much better to recognise whatever deficiencies it may have. It is true that there is a large quantity of flesh upon the Indian Game. This, however, is somewhat hard in texture, close in grain, and is very yellow. In Cornwall, as already stated, where there is a large amount of Indian Game blood, most of the market fowls are very yellow, and as a consequence they do not meet with much favour outside their own district. Further, the Indian Game is a poor layer, and probably her tale of eggs would be as near the bottom in number as any pure breed we have. The eggs are very rich and fine in flavour, which explains why breeders of Indian Game are often very enthusiastic about the eggs produced by their birds.

It would be thought that this breed was of no practical value, but its chief merits are seen when it is used for crossing purposes, and we have had evidence for many years that no breed has served a more useful purpose than the Indian Game in this direction. It is generally admitted, and we have obtained evidence of this fact in other countries as well as our own, that the introduction of yellow blood upon the male side, when mated with lighter-boned and white-fleshed hens, yields very fine quality of flesh. As far as our knowledge goes, the yellow-fleshed varieties are usually hardier, and the introduction of this influence gives that vigour which is always liable to be lost when we are striving to press forward any one special quality. It would appear that, taking the different breeds as a whole, the white-fleshed varieties are less vigorous than those with yellow blood, which fact needs to be recognised in order that we may as far as possible counteract the tendency to enfeeblement which is one of the results of breeding under domestication. The cross which for a long time was advocated was between the Indian Game and the Dorking, and it is the general experience that by the use of Indian Game male birds with Dorking pullets chickens are secured carrying a great wealth of flesh, with much lighter bone than met with in the Indian Game, and that the majority of these birds will come with white flesh and legs; in fact, many of the finest birds exhibited in dead classes have been of this cross, large in size, and with the meat well distributed. But it is undoubtedly true that the Indian Game and Dorking cross-bred birds are not very fast growers, and are more suitable for use when six to seven months old than as young chickens. The reason for this is not easily explained, but we have to take facts as they are.

Another cross which for some classes of trade is distinctly better to secure early chickens is between the Indian Game and Buff Orpington or the Lincolnshire Buff. This certainly yields a very fine quality of flesh, and our own observations have shown that, as a rule, the chickens are lighter in bone than the Indian Game and Dorking cross, whilst they reach marketable condition much earlier. A difficulty, however, arises in that a distinctly larger number of the chickens come with yellow legs and flesh, due to the fact that there is a great amount of yellow blood in the Buff Orpington. It is well known that this breed owes a great deal to the Buff Cochin, and although the yellow tinge on the flesh and legs has been bred out to a considerable extent, yet the influence is only dormant, and when the Indian Game is introduced this influence becomes much more prepotent.

Indian Game are somewhat difficult to rear on damp places, and should not be bred pure by those who must keep their fowls in confinement, as they require plenty of range for perfect health; in fact, only those who breed for exhibition or for sale as stock can be recommended to keep the race.

Description (Fig. 11).—In appearance the head is long and thick, not so fine or keen as in the English Game, nor yet so thick as in the Malay, but with beetle or heavy eyebrows, thus following the last-named breed. The skull is broad, the beak very strong, well curved, and stout where joining the head, giving the impression of great strength; the beak is horn or yellow, striped with horn colour; the face is smooth and fine in texture; the comb is what is known as pea-shaped, closely cut to the head, and very small, as are the wattles; the neck is medium in length and slightly arched; the body is very thick and compact, broad in the shoulders, tapering well towards the tail; the back is flattish, and the breast is wide in front, sloping well, fairly deep, but with a rather flat yet massive appearance; the wings are small and carried close to the body; the legs are very strong, the feet corresponding thereto, and are widely set apart, and the thighs are thick, heavy, and muscular; the shanks are medium in length and well scaled, and are not so long as in the Malay or the modern Game. The size varies considerably—in cocks from 8 to 11 pounds for adults, or even more, and in hens 6 to 8 pounds. The carriage is upright, commanding, and bold, and the general

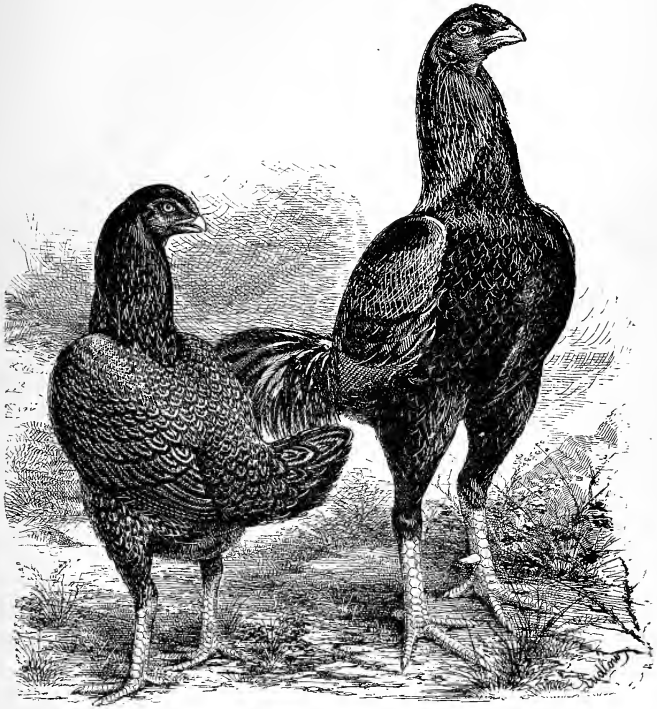


Fig. 11.—Indian (Cornish) Game.

appearance in both sexes is a powerfully-built bird, very active, sprightly, and vigorous. The plumage should be close to the body—in fact, it cannot be what is called too hard. In colour the male bird has on the breast, underbody, and thighs a glossy green-black; the neck-hackle is glossy green-black with brown-crimson shafts to the feathers; the back, saddle, and saddle-hackle are a mixture of rich green, whilst the wing-bow is chestnut with a glossy black bar. The hens are of a chestnut-brown with lacing of medium size, in some cases double, the markings being a metallic green or glossy black. The legs and feet, as already stated, are yellow, and the deeper the better. Taking it altogether, this is a handsome fowl, which at once strikes the onlooker with its vigour and carriage.

Variety.—As already explained, there is only one variety, although two types are met with, one much shorter on the leg than the other.

HAMBURGH.

NOMENCLATURE: *English*, *Hungarian*, Hamburgh; *French*, Hambourg; *German*, Hamburger; *Dutch*, Hamburger; *Danish*, Hamborgerne; *Italian*, Amburgo; *Spanish*, Hamburgo.
VARIETIES: Gold-spangled, Silver-spangled, Black, Gold-pencilled, Silver-pencilled.
CLASSIFICATION: Non-sitting.
COLOUR OF FLESH AND SKIN: Grey.
COLOUR OF LEGS: Leaden-black in black, leaden-blue in other varieties.
COLOUR OF EGG-SHELLS: White.

Origin.—It may be accepted as unquestionable that the varieties of Hamburghs, as we know them to-day, are traceable to two distinct sources. The two Spangled and the Black varieties were evolved in Britain, and have been bred in the North of England for a couple of centuries, if not longer, whilst the Pencilled came from the Netherlands, though they have been altered considerably, as we shall see, since their introduction. When inquiring as to the origin, we must deal separately with the Spangled and Blacks and the Pencilled.

The first mention, however, which has been traced of a fowl bearing any resemblance to the Spangled Hamburgh is from Italy. The great Italian naturalist, Aldrovandi, in his work, the first volume of which was published in 1599, described a class of fowl which he called 'Turkish,' and which certainly had many resemblances to the Spangled Hamburgh, more especially in markings and colour of plumage. The illustration in that work has had more to do with the recognition of the so-called Turkish cock than the letterpress. In respect to the comb, the resemblance is remarkable, for not only is it what we call 'rose,' but also the spike behind is prominent. Hence, as this peculiarity is not found in any other race which can be traced back, it is not unreasonable to assume that the British Spangles were descendants of the fowls described by Aldrovandi, although there is no other evidence in support. What connection these fowls had with Turkey, and why Aldrovandi gave them the name of Turkish, or how they passed to Britain, if they did so, is buried in oblivion. Ferguson* says that 'Hamburgh appears but the medium by which they were originally imported (in the way of commerce) into this country from Turkey or some other Eastern climate,' but gives no proof of their importation. The description given by the same writer † from Buffon resembles the Hamburgh of to-day only in name, whilst the quotation from Chaucer's 'Nonne's Preeste's Tale' needs a strong imagination to connect it with that bred. In fact, it is very evident that earlier writers often confounded it with the Polish, as both crests and tufts are referred to. Dickson ‡ states that 'the Hamburgh is evidently a variety of the Paduan (Polish),' and such an opinion appears evident in the earlier editions of Moubray. These references had no connection with the Spangled or Black Hamburgh. Mr. Harrison Weir suggests § that the Spangled Hamburgh was produced by crossing the old Spotted-breasted Game with the Dutch Everlasting Layers, but offers no evidence in support, and it is difficult to discover how the rose comb would be produced by such a mixture of races.

So far as the Pencilled varieties are concerned, we are on safer ground. In the earliest edition (fifth) we possess of Moubray's work ‖ it is stated that 'There is a small variety now imported from Holland, called Everyday hens, which are everlasting layers.' Many references are made in older books and publications to birds under this or similar names, but the best we have seen is by Mr. B. P. Brent, ¶ in which he says that the Dutch Every-day Layer 'is widely spread over England, and is much esteemed for the production of eggs. It has been long known among us, and various districts have various names for it. . . . These fowls are rather small, but neat and nicely made; they have rose combs, which should terminate in a single point, directed backwards. . . . They are the best sort for laying I know of, though their eggs are smaller than those of some other kinds—still, not smaller than of those of the generality of common fowls. It is very rare for true birds of this breed to want to sit, but they continue to lay throughout the summer; from this reason, and also that they are imported from Holland, they have received the name of Dutch Every-day Layers.' He further names what he regards as a cross between them and the Spanish fowl, of which 'some are single-combed, but most of them have a peculiar-shaped

* 'Rare and Prize Poultry,' by G. Ferguson (London, 1854), p. 267.
† *Ibid.*, p. 270.
‡ 'Poultry,' by W. B. Dickson (London, 1838), p. 15.
§ 'Our Poultry,' by Harrison Weir, F.Z.S. (London, 1903), vol. ii., p. 528.
‖ 'A Practical Treatise on Domestic Poultry,' by Bonington Moubray (London, 1824), p. 19.
¶ *Cottage Gardener* (London, 1852), p. 422.

comb, appearing like two single combs united at the extremities.'

That the Pencilled Hamburgh originated in the Netherlands would appear certain. Mr. Harrison Weir* speaks of purchasing, over fifty years ago, specimens of Gold and Silver Pencilled at Leadenhall, freshly brought over, but makes no mention as to whether they were rose-combed. It is evident, however, that the breed at that period was very similar to the Friesland and the Campine, which we have known for more than twenty years in Holland and Belgium, and which latter has recently attained a measure of popularity in Britain, save that it has a single comb.

Rose-combed specimens of this race are bred in the Low Countries, as shown later. Our view is that the Pencilled Hamburghs came thence, and that the rose comb was fixed by breeding after they were imported, thus bringing them into conformity with the Mooney or Pheasant fowls, with which in general character they had so much affinity. This view is supported by Mr. W. B. Tegetmeier, who says:† 'The Pencilled birds formerly were, and still are, imported in considerable numbers from Holland, under the names of Pencilled Dutch and Dutch Every-day Layers; but the Spangled birds appear to be exclusively English fowls, and are essentially distinct varieties, differing in size, plumage, and in formation of the skull.'

History.—Many are the names under which the Hamburghs have been known. The designations have included: Moonies, Pheasant, Bolton Grey, Bolton Bay, Creoles, Creels, Chittepratts, and Moss, in addition to those common at the present time, or which have already been mentioned. Of these the Spangled were variously called: Moonies, Pheasant, and Moss; the Blacks, Black Pheasant; and the Pencilled, Bolton Grey, Bolton Bay, Creoles, Creels, Chittepratts, and Dutch Every-day Layers. It would appear that they have been bred in the border districts of Lancashire and Yorkshire for at least two centuries, for a writer in the early years of the eighteenth century‡ says:

'One of my pleasant reminiscences of this county (Lancaster) is the pleasure with which I regarded their pretty fowl, the Black Pheasants, as they called them, and which furnished me with many a delicious fresh egg for my breakfast. . . . The stout peasants regard them with much favour, and point with pride to their white ears and flat combs.'

Here we have evidence of the peculiarities of the breed clearly defined as we know them to-day. It would appear that the Moonies, as they were called in Lancashire, and the Pheasant, the term used in Yorkshire, were bred equally with Golds and Silvers in both counties; but as intercommunication was limited in those days, and exhibitions unknown, there were slight differences between the two, yet only very slight, and the type was practically the same.

Spangled Hamburghs are, therefore, really the old Lancashire Mooney or Yorkshire Pheasant breed, and owe their perfection to the careful way in which they have been bred in these two counties. Long before the era of modern shows there were small village exhibitions at which the colliers, hand-loom weavers, and others of the industrial population competed with each other's fowls. In those days only the hens were shown, for the cocks were regarded as too ugly. It was by the introduction of a cross between the Yorkshire and a Mooney cock that the gentlemen were made fit for the show pen. It was the custom for the exhibitors to take their birds under their arms to a room and show them on a table, each exhibitor arguing for the good points of his birds, whilst his rivals pointed out their defects. The judge stood at one side of the table and heard all that was said *pro* and *con* for each bird, of which two were on the table at one time. The worst of these was taken away, the one left having to face the next competitor, and so on. That left at the conclusion of the contest was declared the winner. This system, which would be utterly impracticable nowadays, doubtless had much to do with the perfection to which the breed was brought, for each breeder learnt just in what way his bird was deficient, and he could seek to remedy the defect. In the show-pen at the present time—in this country at least—he has usually to be content with the fact that he is beaten, and must find for himself why.

When poultry shows became common in the middle of last century, it is small wonder that exhibitors were most numerous in Lancashire and Yorkshire, where even now shows are more popular than in any other part of the country.

The fixing of the name 'Hamburgh' would appear to have been largely due to the Rev. E. S. Dixon, M.A., a prolific writer in the *Gardeners' Chronicle* and *Agricultural Gazette*, and whose book on poultry was published in 1850. He—upon what grounds we know not—appropriated the name, securing its adoption by the Birmingham Show, and so it remains, although the breed has no connection with the great port on the Elbe. From that time onwards it has been given to the breed, which with varying fortunes has remained, though no longer with the same popularity for practical purposes. It is yet the best layer we have, and, were the size of eggs produced equal to their number, it would be *facile princeps* among the non-sitting races.

Economic Qualities.—At first sight the Hamburgh would appear to be among the most useful of our breeds of poultry. It has been bred for a long

* 'Our Poultry,' vol. ii., p. 520.

† 'The Poultry Book,' by W. B. Tegetmeier, F.Z.S. (London, 1873), p. 176.

‡ 'A Trip to the North of England,' by Thomas Sutlief (London, 1702).

time, and is certainly one of the most beautiful of our domestic fowls, whilst its prolificacy as a layer is unquestionable. No other breed can be depended upon to produce as many eggs, and hens laying 200 to 230 per annum are by no means uncommon. If we could, therefore, disregard all other considerations, and merely take the combination of striking external characteristics with great egg production, the conclusion we should arrive at would be that this breed of fowl should be universally popular. It is, however, seldom that we find Hamburghs upon farms, either pure or crossed, for which there must be some explanation. It is not sufficient to remember that the Hamburgh is a small-bodied fowl, and therefore not of much value for table purposes, because this in itself would be more than compensated by the productiveness in egg fruit. The fact is that the Hamburgh, as a practical fowl, does not meet market requirements, so far as size of egg is concerned, and in our judgment that explains why the breed has, to a large extent at any rate, been almost entirely relegated to the fancy section of domestic poultry. It is well known that eggs under 2 ounces, if we except the very scarce periods of the year, are not saleable upon the markets for breakfast purposes. They can, of course, always be sold for cooking, but cooking prices are not satisfactory to the producer. The varieties of the Hamburgh which lay the largest eggs are the Blacks, Silver-spangled, and Gold-spangled, and their position would be about the order named. As a rule, however, the eggs from hens of these three varieties do not scale more than 19 ounces to 20 ounces the dozen, and if one of these were placed in an ordinary egg-cup it would be nearly hidden. Consequently, the consumer would feel that he was not getting a fair share of the breakfast, and instead of the dish of eggs being an attractive feature of the table, it would seem as if the egg and its cup were not in keeping. Further, from the buyer's point of view in purchasing Hamburgh eggs, these seem to be dear, and if we take those produced by other breeds which weigh 25 and 30 per cent. more, it will at once be seen that, to pay for

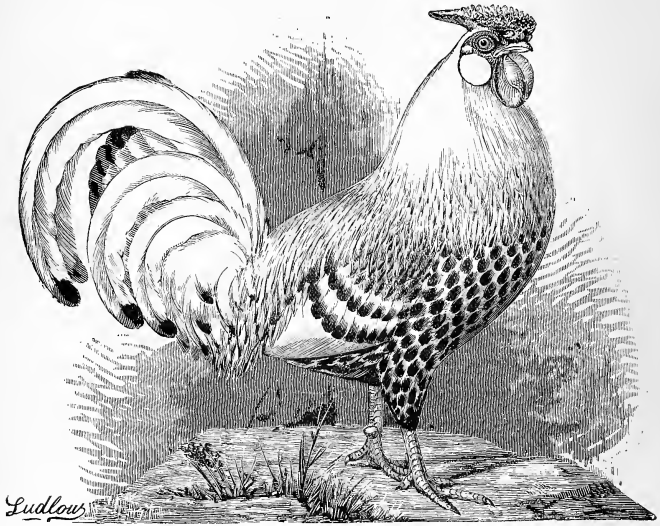


FIG. 12.—SILVER-SPANGLED HAMBURGH COCK.

what is being received, Hamburgh eggs should be bought at a corresponding reduction in price per dozen.

These facts are stated with a view of drawing the attention of producers to a very important question. We cannot alter market requirements, and in the general interest of the poultry industry it would be inadvisable to do so. Of course, a solution of the difficulty, partial at any rate, would be to sell eggs by weight, but in that case small eggs would suffer considerably in demand, if not in price, and if Hamburgh eggs were sold by weight the bulk would be used for cooking purposes rather than upon the breakfast-table, though to some extent they might be poached or fried.

The Hamburgh, therefore, as a pure-bred fowl, is not one which can be recommended to utilitarian poultry-keepers. From its prolificacy it is very useful for crossing purposes, only we must bear in mind that such crosses be made with a breed which lays a much larger-sized egg. It is for this reason that many breeders of Hamburghs have crossed them with the Minorca, and with manifest benefit. There is no reason, however, why the Hamburgh should not in future, even as a pure breed, become much more popular. We cannot expect this to be so, however, until the eggs are larger in size.

For every poultry-keeper who is a fancier, there are probably fifty who do not care about exhibition points at all, and they look to practical results. Any breed, therefore, which fails so seriously as the Hamburgh is greatly handicapped in the race for popularity.

It is generally admitted that Hamburghs thrive best where they have plenty of scope and are not kept in confinement, although large numbers are maintained in that manner. They are splendid flyers, and can easily clear a 10-foot fence. One of the greatest difficulties with regard to the breed, more especially of the Gold and Silver spangles, is the necessity for keeping separate pens in order to breed exhibition cocks and hens. That is, as we explain elsewhere, a very serious drawback to any race of poultry for practical purposes, and has the effect of relegating them to the ornamental class, as the poultry-keeper for profit, whilst he may desire to keep pure races, has no wish to adopt methods of this kind. We, however, deal with the question in another place.

The most serious hindrance, however, after the lack of size in eggs, is the fact that many of the best exhibition Hamburghs are trimmed—that is, the comb is carved into the proper shape. We are inclined to think that careful breeding has to some extent obviated

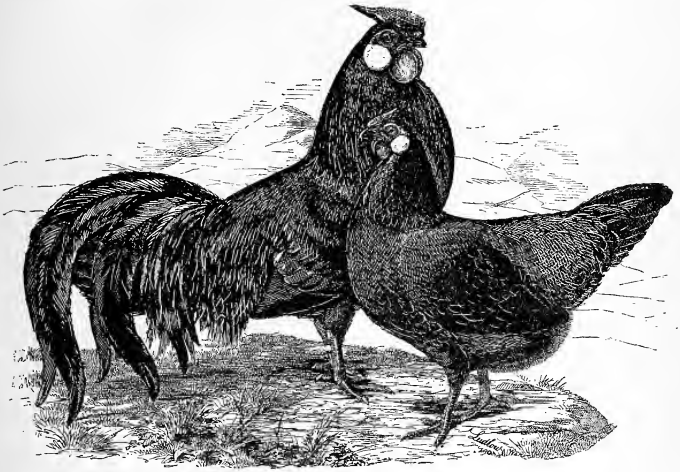


Fig. 13.—Black Hamburghs.

the necessity for this, but it must be recognised that there is still a great deal of it, and any breed which requires cutting in this way must be limited in the number of its adherents. In spite of the fact that the custom is more or less recognised, there are many—we hope very many—who would refuse to descend to such a method. Of course, for non-exhibition purposes the system is absolutely to be deprecated.

Description.—There can be no question that the Hamburgh is one of the most beautiful of our races of poultry in that it combines perfection of form, compactness of structure, brilliance of plumage, with graceful, active habit of body. The size is, as already indicated, small, the Pencilled cocks weighing about 4½ pounds, and Pencilled hens 3½ pounds; the Spangled and Black cocks are 5½ pounds, and hens 4½ pounds. The flesh is greyish in colour, and whilst young chickens are very delicate in meat qualities, their lack of size makes them useless for ordinary market demands; moreover, the flesh is a little too compact. The head of the bird is short and smart, and is surmounted in the cocks by a large comb, which is square and broad in front, although in conformity with the general size of the fowl, gradually tapering towards the back, and ending with a long spike extending in a straight line with the upper surface of the comb, which should be firmly set upon the head. That upper surface is very level, and is covered with fine points. In hens the comb is the same, only much smaller. The face and eyes are red, and the earlobes are pure white, smooth, and as round as possible; in fact, a large amount of importance for exhibition purposes is laid upon the earlobes. The neck is medium in length, and well arched; the neck-hackle, as also the saddle-hackle, is full and long, and the plumage is very profuse. The breast of the bird is prominent and round, and the body is medium in length; the thighs are slender and short, and the legs small in bone and medium in length. The wings are large and carried well up, whilst the tail is long and the sickle feathers broad, a good tail being most important. A great point with regard to this fowl is the excellence of what is called its style—that is, gracefulness of carriage.

Varieties.—As already explained, there are five varieties of Hamburghs — Gold-spangled, Silver-spangled, Blacks, Gold-pencilled, and Silver-pencilled.

Spangled (Fig. 12).—In the Spangled the Golds have a ground colour of rich golden bay, and in the Silvers of silvery white. Each feather in the hens, and on certain parts of the body in cocks, is tipped with a round spot or sapngle, which should be green-black, and it is that which gives the beautiful appearance to these birds. It is usually found in the greatest perfection in the hens. In the cocks the spangle is found on the breast and thighs, and at the end of the sickle feathers and tail coverts. The shoulders, wing-bows, and back have small black, dagger-shaped tips to each feather.

Black (Fig. 13).—This variety is of a beautiful soft green-black over the entire body, also the tail and wings, and the more perfect and brilliant the plumage the better is the bird for ornamental purposes.

Pencilled.—In the Pencilled varieties we have the ground colour as in Spangled, namely, golden bay and silvery white, and the markings are found in the same parts of the body, except that each feather is evenly and distinctly pencilled across with fine parallel lines. When this pencilling and the intervening ground colour are of the same breadth, the effect is very striking indeed.

REDCAP.

Nomenclature: *English*, Redcap; *French*, Chapon Rouge; *German*, Rothkappen; *Dutch*, Roodkappen; *Hungarian*, Veresbobitas; the English name is usually adopted in other countries.
Varieties: Derbyshire; Yorkshire.
Classification: Non-sitting.
Colour of Flesh and Skin: Grey.
Colour of Legs: Slate colour.
Colour of Egg-Shells: White.

Origin.—It is generally admitted that the Redcap is closely related to the Gold-spangled Hamburgh, but the relationship is not easily determined, and we are unable to trace direct connection between them. Various suggestions have been made with respect to the two breeds. The late Mr. Henry Beldon, more than twenty years ago, expressed to us his opinion that Redcaps were coarsely-bred Gold-spangled Hamburghs, in which size of body and of comb had been striven for in contradistinction to the sprightly carriage, neat body, and finer comb of the last-named breed. That view cannot be supported by any facts obtainable at the present time. Our own view is that in the Redcap we see the original type of the Gold-spangled Hamburgh. The differences are what might be expected by breeding on opposite lines. It is generally thought that there has been a cross introduced of Old English Game blood. This view is held by Mr. Albert E. Wragg, who has bred the Redcap for many years, in the last edition of Wright's 'Book of Poultry,'* and Mr. Thos. Watchorn holds the same opinion, in that he says:† 'I have long since come to the conclusion that the Redcap was produced by crossing the Gold-spangled Hamburgh and the Black-red Game fowl,' by which we suppose is meant the Old English Game. In support, the pugilistic nature of the breed would show a connection therewith, and also the occasional tendency to tint in the shells of the eggs.

History.—At one time these fowls were very common in Yorkshire, more especially among the hills

* 'New Book of Poultry,' by Lewis Wright (London, 1902), p. 429.
† *Poultry*, July 13, 1883.

in the southern part of that great county, and in Derbyshire. Thirty years ago at shows in the Sheffield district well-filled classes of Redcaps were regularly seen. But for reasons which have not been explained that is no longer the case, and the Derbyshire breeders almost alone have remained true to their old favourites. Probably the finer qualities of the Hamburgh, and the fact that classes are provided for the latter at exhibitions all over the kingdom, and the less attractive appearance of the Redcap, led fanciers to substitute one breed for the other. In the eighties it appeared as if the Redcap would become extinct for practical purposes, but the efforts of a few breeders have prevented so undesirable a result, and it has won a fair amount of attention, by no means, however, equal to its merits as an economic fowl. Amongst the hills of Derbyshire it is bred to a considerable extent, and is there regarded both for eggs and meat properties as a most valuable fowl.

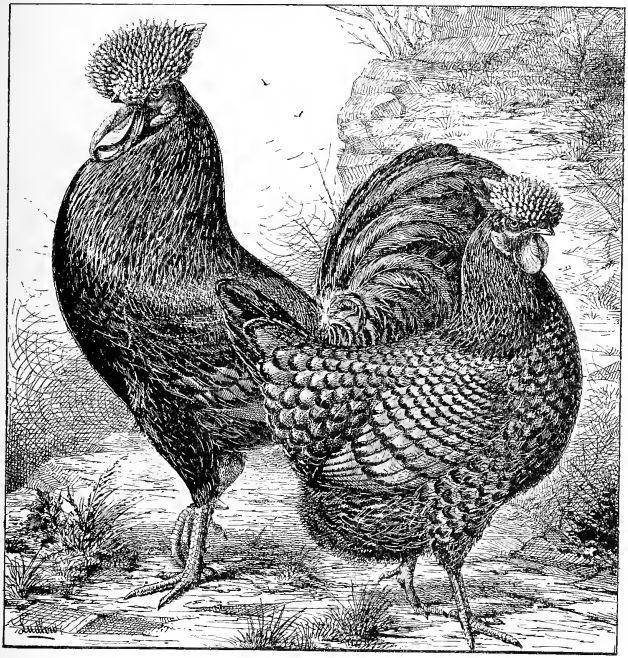


FIG. 14.—REDCAPS.

Economic Qualities.—This breed is remarkable as an egg-producer, in which respect it equals the Hamburgh so far as number is concerned, whilst the eggs are much larger, averaging 2 ounces each. Even among birds bred for exhibition fecundity is highly developed, as we have record of a pullet which in 107 days produced 106 eggs, and during twelve months laid 220 eggs. The eggs are rich in flavour, thus supporting the suggestion that Game influence is present. They are capital winter layers if bred early and well

housed. The birds are light in bone and carry a considerable amount of flesh for a non-sitting breed. The chickens are hardy and easily reared, feathering quickly, and very self-reliant, as they are excellent foragers. But hardihood is a very striking quality of the Redcap, and we have seen specimens among the Derbyshire hills when there were several inches of snow on the ground actively scratching about wherever a bare patch was visible, and in full lay at the time. Our experience has shown that these fowls, by nature mountaineers, thrive better in hilly districts than on the plains, which fact should be remembered by those who are disposed to select the breed. It is essentially a practical fowl, in which economic qualities are highly developed, and but for the coarse comb would doubtless have attained a much greater degree of popularity.

Description.—The most prominent feature of the Redcap, and the one which suggested its name, is the comb. That is rose, as in the Hamburgh, but very much larger, and distinctly coarser—in fact, frequently the comb is so large that it hangs on one side, and when such is the case the appearance is certainly not attractive. It is full of points on top, and has a spike behind, but the latter is short. This breed has the largest rose comb seen on any fowl. In size of body the Redcap differs greatly from the Hamburgh, as males weigh from 6½ to 7½ pounds, and females from 5½ to 6½ pounds. But for the fact of this larger size it is probable that the breed would have been merged in the Gold-spangled Hamburgh. In plumage the ground colour is red, and thus differs from the golden bay of the last-named variety, lacking the sharp contrasts found in that breed, as the black does not show so clearly owing to the deeper body colour. In the cock the hackles are striped with black, and both in cocks and hens there are the moon tippings or spangles, but in the cock the underparts and the tail are black. The beak in both sexes is horn colour; the eye red; the comb, face, wattles and earlobe red; and the legs and feet slate colour.

Varieties.—There are two recognised varieties of the Redcap, namely, the Derbyshire and the Yorkshire, although breeders frequently divide them into three classes—that is, the large, medium, and small-combed respectively. For our purpose it will be enough if we omit the last named, as they are nearly allied to the Gold-spangled Hamburgh.

Derbyshire Redcaps (Fig. 14) are medium in comb, the measurements of which are 5¼ inches long and 3¾ inches wide, and deep in proportion. In many of the best specimens the comb is almost round, whilst in others it is broad in front and taperiug behind, though never to a fine point. The former is generally preferred.

The Yorkshire Redcap is larger and coarser in comb, which naturally is higher, with a decided tendency to one side. The effect is by no means pleasing, and so long as external characters are regarded, which we hope will always be the case, excessive development of any point is undesirable. Moreover, the discomfort of so large a comb is very great, and the production and support of a huge mass of flesh means waste of vigour and of effort.

SCOTCH GREY.

Nomenclature: *English*, Scotch Grey; *French*, Cocou d'Ecosse; *German*, Graue Schotten; *Dutch*, Schotsch Grey; *Italian*, Coucou de Scozia; *Spanish*, Coucou de Escocia; *Hungarian*, Szürke Skót.
Variety: One.
Classification: Non-sitting.
Colour of Flesh and Skin: White.
Colour of Legs: Mottled.
Colour of Egg-shells: White.

Origin.—The foundation of the Scotch Grey is buried in oblivion, and inquiries made carry us back upwards of half a century, but not beyond. In a work by Mrs. Fergusson Blair, published nearly fifty years ago, it is stated that* 'in Scotland this breed is much valued. It is of great antiquity, and still to be found in the most remote districts. . . . Some assert that it is a mere modification of the Dorking, fine specimens of which occur of similar colour, which I have heard styled the "Blue Mottle," and it cannot be denied that it is largely imbued with the blood of these.'

Other writers support the suggestion that the breed has been established for a long period of time, but no definite information can be obtained as to its origin. Several years ago a writer† said that 'it is thought to have originated from the old barn-door fowl of Scotland, and has been raised to its present state of perfection by careful breeding and selection.' There is certainly no evidence that the Dorking was used in its production, although that breed has been long known in Scotland; and the fact that the shape is very different, and that the fifth toe—a tendency to which is always apparent where Dorking blood is present—is never met with in the Scotch Grey. Mr. Harrison Weir‡ says that during visits to Dumfriesshire in 1862-1864 he found the ordinary fowl of the country largely grey in body colour, which fact would support the contention that the Scotch Grey, as we know it now, has been evolved from the barn-door fowl found in North Britain, but which may in its turn have been influenced both by the Dorking and the fighting Game centuries ago.

History.—We have always held the opinion that this breed has never received full justice even in its native country. Thirty years ago it was kept to a much greater extent than is now the case. At that period the breed was widely distributed around Melrose and

* 'The Henwife,' by Mrs. Fergusson Blair, of Balthayock (Edinburgh, 1862), pp. 128, 129.
† *Live Stock Journal Almanack*, 1895, p. 199.
‡ 'Our Poultry,' by Harrison Weir, F.Z.S. (London, 1903), p. 352.

Kelso, in Lanarkshire, and in the Carse of Gowrie, to our personal knowledge, and the display of Scotch Greys at the Edinburgh Poultry Show in 1877 was remarkable both for numbers and quality. But a decline set in, doubtless owing to the introduction of other races, which has continued. The fowls met with upon farms are no longer of this type, in spite of efforts —very spasmodic, it is true—to regain the ground lost. of large white-shelled eggs, and it is a fact that during later years the enormously increasing demand for eggs has led to the substitution of other races, such as the Minorca, the Leghorn, and the Plymouth Rock, for the Scotch Grey. And, further, in these days the market demand is not for very large eggs, but rather those of a medium weight. What is lost in number of eggs is more than gained by the excellent flesh properties of

FIG. 15.—SCOTCH GREYS.

Economic Qualities.—The Scotch Grey might almost be classed as a General Purpose breed but for the fact that many hens do not, as a rule, show any desire to sit, and such as become broody are very unreliable indeed, often deserting their nests after a few days. They are very hardy indeed, and the chickens are easily reared, as might be expected, coming as they do from Scotland. They are fairly good layers this fowl. The meat is well placed, abundant and of good flavour, partaking of that juiciness when cooked which is preferred upon our markets, more especially in a country like Scotland, where fattening is not practised. These birds are not so long in body as several of the table breeds, and could not be placed in the front rank; but where the demand is both for eggs and poultry, combined with vigour of constitution, the

Scotch Grey deserves attention, and it is to be regretted that the breed is not better known. Even in poultry-keeping fashion has a potent influence, and cannot be ignored. The Scotch Grey has proved an excellent cross, and with the white-fleshed races especially is able to give that hardihood so essential where the conditions are less favourable, or a measure of forcing is employed.

Description (Fig. 15).—The plumage in this breed is peculiar to itself. The ground-colour is of a pale bluish-grey, and each feather is clearly and evenly barred with a dark metallic blue. The barring on the body, thighs, and wings is straight across the feathers, and should be equal distances from each other; whilst on the hackles, saddle, and tail it has a slight angle from the edge to the centre. In the hens, however, the markings are larger and more clearly defined than in the males. One difficulty in breeding, found with all fowls having cuckoo plumage, is that some birds are very light and others dark, almost black. In chickens generally the lighter birds prove to be cockerels and the darker pullets. The beak is white, or white streaked with black; the eye is red; the comb, face, ear-lobes and wattles bright red; and the legs and feet mottled black and white; the comb is single, fine in texture, and medium in size, firmly set on the head; the head and neck are long; the breast broad and full; the back broad and short; and the legs long with strong bone. Weight: males, 9 to 11 pounds; females, 7 to 9 pounds. At one time there was a distinct tendency to the Dorking type, and in some strains there had been crossing with the Cuckoo Dorking. In a letter written by the Hon. Miss Hubbard under the cognomen 'Henwife,'* it was stated that many of the birds bred came with soft feather and Dorking shape; but that is no longer the case, thanks to the Scotch Grey Club, as a more upright, sprightlier bird is preferred, following more after the Game type.

ORPINGTON.

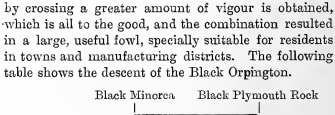
Nomenclature: Orpington is used in all countries.
Varieties: Black, Buff, White, Spangled.
Classification: General Purpose.
Colour of Flesh and Skin: in Blacks, grey; in other varieties, white.
Colour of Legs: in Blacks, black; in other varieties, white.
Colour of Egg-shells: Medium brown.

Origin.—The varieties which are designated by the name Orpington must be dealt with separately in respect to their origin, as they have no relationship whatever. But the plasticity of the domestic fowl is evidenced by the way in which the differing characters and tendencies have been brought into unison.

Black.—This variety was originated by the late Mr. William Cook, then living at Orpington, Kent, and he gave that cognomen to the new fowls, as he was perfectly justified in doing. It will be better to describe the process of evolution in his own words.*

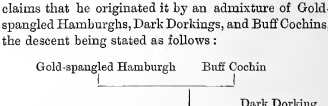
'I . . . commenced mating Minorca cocks with black Rock hens, then Langshan cock to the above hens.† I may mention that I used birds which exhibitors would have termed useless—Minorca cocks with red in their earlobes, which caused them to be unsuitable for breeding pure birds; the black Plymouth Rock hens thrown on one side by exhibitors as being sports only from the grey; and the clean-legged Langshans, of no use whatever to breed birds such as were required by the standard of the Langshan Club at that time. Such birds as these were put on one side for laying purposes or for the pot.'

Mr. Cook goes on to claim that these rejected specimens are generally admitted to be the best layers, and therefore that the mating produced a finer fowl than any of the parents. It can readily be admitted that by crossing a greater amount of vigour is obtained, which is all to the good, and the combination resulted in a large, useful fowl, specially suitable for residents in towns and manufacturing districts. The following table shows the descent of the Black Orpington.



It would be erroneous to state that all Black Orpingtons have descended in the above manner, and in some strains there has evidently been a considerable infusion of Cochin blood; in fact, many more nearly resemble in brilliancy of plumage and shape the Black Cochins exhibited about twenty-five years ago, differing merely by absence of heavy hocks and leg feathers.

Buff.—The origin of this variety is a disputed point, one which has not been satisfactorily settled. The Buff Orpington undoubtedly owes its popularity in the first place to the late Mr. William Cook, who claims that he originated it by an admixture of Gold-spangled Hamburghs, Dark Dorkings, and Buff Cochins, the descent being stated as follows:



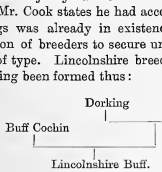
Be that as it may, what is here assumed to be a new breed had been in existence for a long period of time in

* *Live Stock Journal*, December 11, 1885, p. 564.

* *Fanciers' Gazette*, May 2, 1890, p. 361.

† We understand this to mean that Langshan cocks were mated with the Minorca Rock hens.—E. B.

the county of Lincoln. Birds of a similar type have been personally known to us for more than twenty years, especially in the Spalding, Boston, and Louth districts, under the local name of Lincolnshire Buff. They were, however, more of the Cochin type, due to want of definite aim in breeding and to careful selection, but were, as a rule, white skinned and legged, and the great majority had feathers down the leg. Hence what Mr. Cook states he had accomplished by specific matings was already in existence, only needing the attention of breeders to secure uniformity and refinement of type. Lincolnshire breeders regard the breed as having been formed thus:



Even if we accept the statement that some of the Buff Orpingtons were produced in Kent, there is abundance of evidence that the great majority of present-day Buffs are directly bred from Lincolnshire Buffs without the slightest relationship to Mr. Cook's strain; or, as Mr. R. de Courcy Peele says:* 'The foundation had been laid many years previous to Mr. Cook's time in the shape of the Lincolnshire Buff, a variety, if it may be so called, which has for many years been the acknowledged farmers' fowl in and about Spalding and the neighbouring towns.'

The White is said to have been produced by a compound of White Leghorn, White Dorking, and Black Hamburgh. If so, where is the tendency to rose combs, as might be expected by only one of the three breeds not having a rose comb? The whole appearance indicates a sport from the Blacks.

Spangled.—Here the origin is said to be a cross between the Spangled Old English Game and the Dorking. Again, the affinity with the Speckled Sussex is so striking as to make the two practically the same.

History.—The Black Orpington was introduced in 1886, and was boomed for all it was worth. A black fowl, it had special recommendations for residents in suburban and manufacturing districts, whilst its useful qualities and undoubted hardihood were greatly in its favour. At that period large numbers of new breeders were taking up poultry both for exhibition and productive purposes. Thus a new variety appealed to them. A few enthusiastic breeders carried all before them. At that time breeding was most uncertain. We have seen half a dozen distinct types in one show, and two, if not three, types shown by one exhibitor. Perhaps that fact added to the zest, as it did to the chances of breeding. The fact is that the variety was introduced whilst its type was by no means fixed, and in a very crude state, certainly not worthy of naming as a breed. But that condition of things passed in process of time. Whilst its great popularity only lasted a few years, it is bred to a considerable extent.

Around the Buffs a fierce contest arose, not in respect to the qualities or the characteristics of the variety, but the name. It is not our purpose to go over this ground, as the doing so would be futile. Apart from all questions as to the claims put regarding the origin, as to whether—which is our belief—the Buff Orpington is a refined Lincolnshire Buff, as to whether Mr. Cook did not buy Lincolnshire Buffs before he introduced Buff Orpingtons, as to whether he did not sell Lincolnshire Buffs as Buff Orpingtons, and as to whether birds identical and bred from the same parents have not been, and are still, sold under both designations, there is an important question as to name. When Mr. Cook brought out the breed in 1894 the Orpington Club protested strongly against the use of the name Orpington, and others did the same. The question was ably summed up by Mr. Lewis Wright:*

'A breeder might justifiably use any name he likes really open to him; but when a man has already appropriated the name of his own residence to one breed, of which he tells us the components were A, B, and C, there are the gravest objections to his giving, years afterwards, the same name, for merely trade and advertising purposes, to another "breed," which, according to his own account, has no particle of A, B, and C, but was built up of X, Y, Z.'

With these observations we absolutely agree, and the Poultry Club failed lamentably in recognising the name under these conditions. But the thing is done, and cannot now be altered. The 'canniness' which designed the *coup* has had its reward. But we feel that a grave injustice has been done to Lincolnshire breeders. The advantage they would have reaped has gone elsewhere. Fortunately, 'a rose by any other name would smell as sweet,' and nothing could injure the economic qualities of the Buff Orpington, which proved to be very great. No breed of fowl has attained so universal a popularity, in spite of the many disappointments met with. The demand for these birds grew so rapidly that it was impossible to meet it. Large numbers of half-bred Buff Cochins and Dorkings were sold as Buff Orpingtons. We have seen the progeny of high-priced birds sold as pure stock, of which 75 per cent. were yellow-legged and feather-legged. Anything bearing the name 'Buff Orpington' was saleable, or, as a Lincolnshire breeder wrote us, 'If I call my birds Lincolnshire Buff, I cannot get more than 4s. each for them; if I call them Buff Orpington, they sell readily at 10s. each.'

* 'Orpingtons and All About Them,' by R. de Courcy Peele (London, 1900), p. 12.

* *Feathered World*, December 16, 1898.

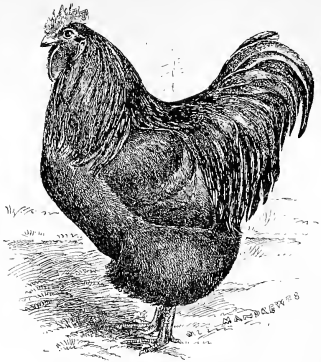


FIG. 16.—BLACK ORPINGTON COCK.
Bred by W. M. Bell, St. Leonard's, Ringwood.

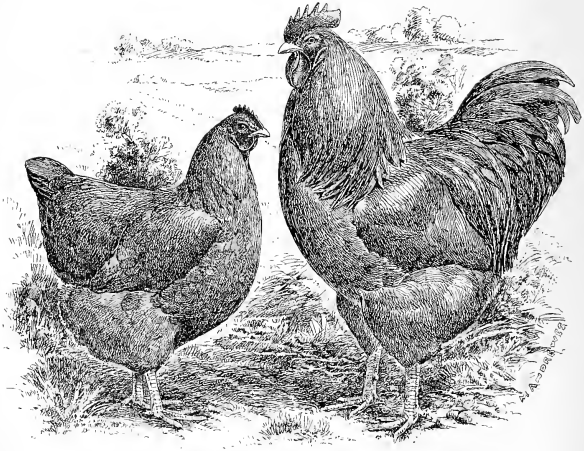


FIG. 17.—BUFF ORPINGTONS.
Bred by Edward A. Cass, Burgh, Lincs.

But that stage has passed. At first the resemblance between the Blacks and Buffs was more imaginary than real. Now the latter are longer in leg and more upright. But the types have been brought nearer together. Even yet there is a tendency to yellow and feathered legs, but not nearly to the extent met with formerly. As to Whites and Spangled, they have no history.

Economic Qualities.—The tendency of those who advocate the adoption of any breed is to exaggerate both characters and qualities, and no breed has suffered more than the Orpingtons in this respect. If one tithe of what has been said respecting them were true, they would deserve to be canonized. Such statements are very misleading, but the devotees of almost every breed appear to be subject to the same contagion at one period, generally that of infancy, when proportions are by no means true. All breeds must be judged practically, and their qualities carefully and calmly considered in the light of experience.

The Black Orpington is a big, bulky fowl; hardy, but not very rapid in growth, as it is somewhat heavy in bone. It carries a fair amount of flesh, which is greyish-white in colour, but is fine and delicate in skin. There is too much flesh upon the legs to regard it as a first-class table fowl, though that flesh is juicy and decidedly superior to what is found upon more active fowls. The bird fattens fairly well, but its grey flesh detracts from its appearance when dead. The breast meat is not very abundant, considering the size of body. The hens are good layers, especially in winter, and the eggs are medium in size and in tint. For general purposes, and especially for birds which must be kept in confinement, in towns and manufacturing districts, its black plumage is a great recommendation. All varieties of Orpingtons are good sitters and mothers.

Buff Orpingtons have a combination of qualities which is rarely found, namely, white skin and legs and the production of tinted-shelled eggs. To that fact is due the rapid growth of popularity of the variety. Not only do we thus secure the colour of egg-shells so much in demand, but such birds as are killed for market command a good price. We have found these birds hardy upon dry soils. The amount of yellow blood in their composition enables them to be kept on heavy soils more profitably than other white-legged races, though they grow more quickly upon lighter soils. The chickens develop faster than Blacks, as they are much lighter in bone, but cannot be regarded as very rapid in attainment of maturity. The flesh upon the body is well distributed, and chiefly upon the breast, where it is plump and thick upon the keel; it is good in flavour, and white, the birds fattening well. The hens are excellent layers, and if bred early are very productive in winter; the egg-shells are of a light buff tint. This combination of qualities makes the Buff Orpington one of the best varieties for general purposes we have at present, and we were interested to find, during visits to Hungary in 1902 and 1904, that it has been introduced into that country as a most suitable race for improvement of table qualities and securing coloured-shelled eggs.

Whites and Spangled are not much kept by practical poultry-keepers.

Description.—In appearance the Buff Orpington is a large-bodied fowl, standing on rather short legs, more especially in Blacks. The body is broad and deep, the breast carried well forward, with a long, even breast-bone; the shoulders are broad, and the back short and curved; the wings are of good size, and carried close to the body; the head is small and neat, the beak strong, and the comb of medium size—where single carried erect, where rose formed close to the head; the wattles are medium in length, and round; the neck gracefully curved, and covered with a full hackle; the tail is of medium length, with well-curved sickles in the cock, and carried fairly upward in the hen; the thighs are short, and legs short and strong, rather longer in the Buffs than the Blacks; four toes on each foot; there should be no signs of feathers on the legs and feet; the general appearance is that of a short, compact, cobby fowl. Weight: males, 9 to 10 pounds; females, 7 to 8 pounds.

Varieties.—Black (Fig. 16) has greenish-black plumage, with a bright sheen; the beak is black, as are the legs and feet; the eye is black, with a dark brown iris; the comb, wattles, face, and earlobes red; combs are generally single, medium in size, but a rose-combed variety is bred to a limited extent.

Buff (Fig. 17).—The colour of plumage varies considerably from a lemon to deep buff, and is generally deeper in the cocks than the hens. Originally black feathers were found in the tails in both sexes, but by careful selection this feature has been greatly improved. It should not, however, be carried to an extreme, and it will frequently be found that the black-tailed birds are the more vigorous and the better layers. White feathers in the wings are often met with, and to these sports there will ever be a tendency, as buff is an unnatural colour for fowls; the beak is horn colour, or white; the eye, red or brown: the comb, wattles, face, and carlobes, red; and the legs as pure white as possible.

White in all respects the same as Buff, except the plumage and beak, both of which are white.

Spangled follows closely after the Spangled Game—that is, the ground colour is black and red, the latter predominating, spangled or splashed with white; less white; other points as in Buffs.

CHAPTER IV

ASIATIC RACES OF FOWLS

Brahma — **Java**
Cochin — **Aseel**
Malay — **Black Sumatra**
Langshan

IT is generally recognised that the domestic fowl originated in Southern Asia, and that the breeding of poultry has for many centuries been followed very largely throughout the eastern and southern sections of that great continent, and in the islands from Japan to the Malayan Archipelago. As a result, there are found races of decided individuality. In some directions, more especially in China and Japan, peculiar forms have been developed, largely of a diminutive or bantam character, and in what are known as the Japanese and Booted Bantams and the long-tailed Yokohama the abnormal is very strikingly manifest. With these ornamental races it is not our purpose to deal, as they are of small economic value, and are chiefly bred for exhibition. But among the larger races several of the best known have been imported directly from Asia, although considerable modifications have followed their introduction into Europe and America. These races are of a distinctive type, and as a rule they are large in size of body, have long necks and legs, are somewhat heavy in bone, and, with one exception, produce tinted-shelled eggs — in some cases the shells are very deep in tint. These breeds have, without exception, been obtained from the countries adjacent to the sea-coast of Asia, or from the islands where Europeans have settled, and possibly, as the central States of the continent are open to foreign trade and travel, we shall learn of other forms or variations of those already known to us. Pioneers in the opening up of any country are seldom interested in the study of animal and plant life, and it is not often that we learn much as to these until traders or others have been settled for some time.

Some of the breeds named below are not now of practical value, but they have exercised, directly or indirectly, great influence upon the evolution of newer races, and are capable of doing so in the future, for which reasons they are included.

BRAHMA.

NOMENCLATURE: In all countries, Brahma or Brahmapootra.
VARIETIES: Light, Dark.
CLASSIFICATION: General Purpose.
COLOUR OF FLESH AND SKIN: Yellow.
COLOUR OF LEGS: Yellow.
COLOUR OF EGG-SHELLS: Medium brown.

Origin.—Respecting the origin of the Brahma there has been much controversy, and the facts were for a long time buried beneath a very mountain of misstatements, designed in many cases to deceive the unwary. It is needless for us to go over this well-trodden ground. Those who are sufficiently interested to study the subject can find an excellent summary in Wright's 'New Book of Poultry.' It may be accepted that the Brahma originated in India, where fowls of the original type are to be met with, under the name of the Grey Chittagong, in the Brahmapootra district. The division into two colours is the result of breeding and selection in America and England, as the first birds were distinctly light in plumage. Mr. Lewis Wright* is inclined to accept the suggestion that the Dark Brahma was originated by the late George P. Burnham, of Boston, U.S.A.

History.—The first Brahmas appear to have been imported into America in September, 1846, brought direct from the port of Lukipoor, which is some distance from the mouth of the Brahmapootra River. The birds were purchased by a man named Charles, living in Connecticut, and the first brood were hatched in May, 1847. In the autumn of that year they were sold to a gentleman called Mr. Virgil Cornish, of New Britain, Connecticut, and were bred by him. These birds commanded a great deal of attention by

* 'New Book of Poultry,' by Lewis Wright (London, 1902), p. 264.

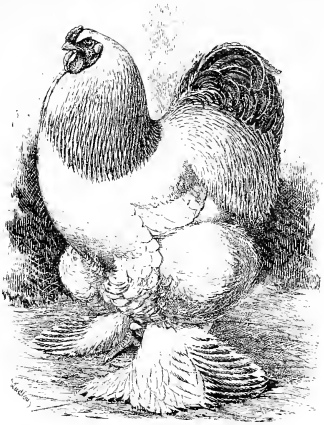


FIG. 18.—LIGHT BRAHMA COCK (ENGLISH TYPE).

FIG. 19.—LIGHT BRAHMA COCK (AMERICAN TYPE).
Bred by H. N. Rollins, Woodville, Mass.

their great size, some of the adult cocks weighing 12 to 14 pounds. They varied a good deal in type, had a small comb, and many of the earlier specimens did not show the pea comb which is now a fixed character. The name Brahmapootra was given to them by a committee at Boston in 1850. Three years afterwards a pen of these birds was sent by Mr. G. P. Burnham, who was then pushing the breed for all it was worth, to the late Queen Victoria, and that, so far as is known, was the primary introduction into Great Britain. They were taken up here with a good deal of energy, and for a long time held the place as one of the most popular breeds, rivalling the Cochin in that respect. Unfortunately, many changes have resulted from the adoption of different ideals, and to-day the American Brahmas are distinctly different from the English. On this side, especially with Dark Brahmas, too much attention was paid to the pencilling in the hens, nearly everything being sacrificed in that direction, but both with Lights and Darks the greatest amount of evil has resulted from excessive development of hocks and leg and foot feathering — in fact, following more upon the lines of the Cochin type. In America, as will be seen by the illustration (Fig. 19), the development of hocks has not been carried to the same length.

If we compare the earlier Brahmas with those seen to-day, it will be noted that the former, whilst feathered on the legs, were only so to a comparatively small extent, whereas to-day long feathers are regarded as important. The result has been, from a utilitarian point of view, most disastrous. Feather is the most expensive material to produce, and hence the birds are slower in growth, greater eaters, and distinctly inferior in productiveness to the original type. For these reasons the Brahma is now practically a fancy fowl, and except in the direction noted below, they are seldom kept for practical purposes in Europe.

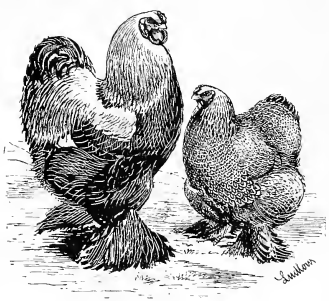


Fig. 20.—Dark Brahmas (English Type).

Economic Qualities. — When first introduced the Brahma was undoubtedly a good layer, the eggs being deeply tinted in shell, although somewhat small in size, as is the case with most of the Asiatic breeds. The younger stock were very good upon the table for a General Purpose variety, carrying a considerable amount of flesh, and they were fairly quick in growth. That, however, has been greatly altered. Although it must be recognised that the breed is no longer of the same value as formerly, there is in it a great amount of reserve strength and virility. It is a striking fact that some of the best breeds recently introduced have had an infusion of Brahma or Asiatic blood, more especially from the Light Brahma.

In Europe we have two breeds, brought out in France and Belgium respectively, namely, the Faverolle and the Coucou de Malines, which owe a great amount of their value to the Light Brahma influence used in the making of these races. For crossing purposes that variety is very valuable indeed, and there is a multitude of ways in which crosses can be made, giving splendid results. The point which we should like to bring forward is that those who desire to retain the good qualities of the Brahma, and there are a few strains in this country of the older type, should boldly discard the heavy specimens which are chiefly in favour. If they could obtain from breeders birds of a slighter build of body, with comparatively little leg and foot feathering, they would find them amongst the best for this purpose. As a pure race, bred upon present lines, the British-bred Brahma is not to be recommended, and the American is decidedly superior.

Description. — The Brahma is a large-bodied fowl, with full, broad, and deep breast, carried well in front; the back is broad, but short, and the tail, which is medium in length, rises sharply from the back and nearly upright, being almost as high as the head; the head is small, rather short, well rounded, surmounted by a triple or pea comb, which is very small, the centre ridge being higher than that on either side; the beak is yellow, and the eye orange-red; the bird is heavy in bone, with strong, powerful legs and feet, thickly covered with feathers, and English Brahmas are bred with stiff protruding hock feathers, generally proportionate to the foot and shank feathering. The general appearance is that of a large-bodied fowl, with good carriage, the body being profusely covered with feathering, which is not quite so soft as in the Cochin. The skin is yellow, as are the legs and feet. Weight: adult cock, 11 pounds and upwards; cockerel, 9 pounds.

In America, as already indicated, there has not been the same development of hock, leg, and foot feathering, and it is scarcely surprising that the economic qualities of the breed have been maintained to a greater extent than in this country.

Varieties.—LIGHT (Figs. 18 and 19).—The plumage is of a silvery-white, densely and sharply striped with black in the centre of each feather on the neck and saddle hackle; the primary feathers on the wings are black or black edged with white, and the tail and tail-coverts are glossy black; the other parts of the body are silvery white.

DARK (Fig. 20).—The head, beak, and shoulder-coverts are silvery-white, as are the wing-bows; the neck and saddle hackles are silvery-white, striped with black in the centre of each feather; the breast and under-parts of the body, thighs, and fluff, the primary feathers, legs, and leg feathering, are of a deep, intense black, although sometimes this is slightly laced with white. In the hens each feather is pencilled with silver-white upon a dark ground.

COCHIN.

NOMENCLATURE: In all countries, Cochin or Cochin China.
VARIETIES: Buff, Partridge, White, Black, Cuckoo.
CLASSIFICATION: General Purpose.
COLOUR OF FLESH AND SKIN: Yellow.
COLOUR OF LEGS AND FEET: Yellow.
COLOUR OF EGG-SHELLS: Deep brown.

The race which passes under the above name, and was at one time known as the Cochin China, has probably exerted greater influence through its importation than any other breed which has ever been introduced. The importation of the Cochin fowl caused a boom in poultry-raising which lasted for a considerable period of time. This breed, which was first known under the name of Shanghai, was vaunted to the skies as the best, the most prolific, the handsomest bird that ever was seen. Largely owing to the demand for specimens and the desire to see the best birds, the exhibition system arose, and but for these influences would never have attained its present dimensions. The possession of a pen of these birds meant a fortune, so it was said. The hens were claimed to lay several eggs per day, the flavour and colour of the richest, and fabulous prices—fabulous even when compared with those now realized for first-class exhibition stock—were given for specimens: £50 for a cock or £5 for a setting of eggs was no uncommon figure. Poultry shows became the resort of fashionable folk, and crowds attended, struggling almost for the right to be there. But in process of time the bubble burst, and the vaunted merits of the fowl were found to exist only in the imagination of those who puffed up the breed.

Origin.—So far as is known, the original specimens came from Shanghai, in China, and had never been near Cochin China. It was under the name of Shanghai they were first described, and for a long time in America it was the object to retain the first name; but Cochin was certainly a more euphonious title, and was generally adopted. The first birds seen in England were purchased from a ship in the West India Docks in 1845, and as they were distinctly different from anything known at that time, they became popular. We have never been able to trace that birds of this type are common even in the Shanghai district. It would appear that the earliest Cochins were largely buff in plumage, although by no means even in colour, as is now the case, many of them being much darker.

History.—The first recorded importation, as already stated, took place in 1845, though it is said that about two or three years before specimens of the breed had been seen by officers of both the British Army and Navy in China. In 1845 Her Majesty Queen Victoria received several birds of this breed, and exhibited these at the show of the Royal Dublin Society in the April of 1846. At a show held in the Zoological Gardens, London, in 1845, prizes were given to Malays and other Asiatic breeds, but none of the Shanghais or Cochins were exhibited.

As already stated, when once imported they rapidly advanced in popular favour. The example of Queen Victoria had much to do with this, together with their novel appearance. The large size was greatly magnified, and the hoarse crow was said to be nearly as loud as the roar of a lion. When first introduced the breed was very uncertain. As already mentioned, the earlier birds were largely buff in colour, but sports were soon produced, which ultimated in the different varieties as seen to-day. The earlier specimens, whilst more heavily feathered than the Brahmas, were not nearly so profuse as is now the case. Breeding has led to an enormous development of hock, leg, and foot feathering. The fowls, however, were always thickly feathered, and the plumage was soft in texture, whilst there is a rotundity of shape which is almost peculiar to this breed. When the Cochin mania came to an end, and it was recognised that the breed was not nearly so good in economic properties as had been claimed, ordinary poultry-keepers soon abandoned them, and for thirty years they have been practically in the hands of a comparatively few fanciers. In America they have ne attained the same favour as they did in this country.

Economic Qualities.—Probably one of the causes which led to the first popularity of the Cochin was the fact that it is a remarkably good layer in winter, and at a time when few eggs are obtained any breed showing this quality is necessarily much in

favour. The hens, however, lay few eggs, taking the whole period of the year, and when about fifteen to twenty are produced generally desire to sit—in fact, they are very intense sitters, and where number of eggs is an important consideration this is greatly against them. The eggs are small in size, very rich in flavour, with a highly-coloured shell. Young chickens are tender and fairly good on the table, but when older they cannot be regarded as even possible in that respect. The flesh is at all times very yellow, and more largely developed on the thighs than the breast. This is due to the fact that they are not flyers, having small wings, and with such heavy bodies large wings would be necessary. As it is one of Nature's rules never to develop that which is not needed, the muscles of the breast are small, whilst those of the thighs and legs are large. They are very hardy, and can stand almost any place and soil, but for exhibition specimens they must be kept on short, level grass, as the foot feathering is broken and spoiled if the grass is long or the ground rough. The chickens are easy to rear, but slow in coming to full growth, and the cocks cannot be relied upon as breeders after they are three years old, at which age hens are very poor layers indeed. Another point which militates greatly against this breed is the amount of food required to maintain them. We find that this was recognised even at the very first. In 1853 an account* was given of an experiment as to the amount of food required, from which it is shown that the average cost of feeding the birds amounted to about 4d. per week, which is confirmed by the experience of M. Lemoine.† It was shown by this gentleman that Cochins consumed 17 ounces 296 grains of food per day, as against 7 ounces 31 grains for Langshans and 4 ounces 398 grains for Leghorns.

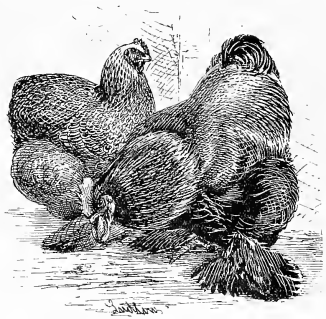


FIG. 21.—PARTRIDGE COCHINS.

Description.—The general appearance of the Cochin is a strong-bodied fowl, broad, deep, full in front, and thickly covered with feathers. The back is short and broad, rising to the tail, which is small and full, and free from sickle feathers; the head is small and neat in respect to the general proportions of the breed, and the comb is single, small in size, standing perfectly upright, and evenly serrated; the legs and thighs are short, widely set apart, and thickly covered with feathers, as are the hocks, the latter often curled round the joints; the appearance is bold and massive; the bone is very heavy, giving an appearance of great strength, whilst the beak, flesh, and skin are yellow. Weight: males, 10 to 12 pounds and upwards; females, 8 to 10 pounds.

Varieties.—The number of varieties is five—namely, Buff, Partridge, White, Black, and Cuckoo.

In the BUFF, of which there are two shades—namely, lemon and cinnamon—the plumage is of an even shade, varying from a lemon-buff to a rich buff, perfectly uniform throughout, except that there is a little deeper tinge on the hackle and saddle feathers, and in the case of the cock on the wing-bow.

PARTRIDGE (Fig. 21).—These are beautiful birds, rich in colour. The head is dark red or orange, and the hackles orange or golden red, with a black stripe in the centre of each feather. The breast, under-parts, tail, leg feathers, and parts of the wings are black; whilst the back, shoulders, coverts, and wing-bow are a rich dark red.

WHITE.—In these the plumage is a pure glossy white all through.

BLACK.—In young specimens the plumage is of a rich glossy black, and the more metallic in appearance the better.

CUCKOO.—In these the ground colour is a light bluish-grey, each feather barred across with bands of darker grey or blue.

MALAY.

NOMENCLATURE: *English*, *Hungarian*, Malay; *French*, Malais; *German*, Malayen; *Dutch*, Maleier; *Danish*, Malayere; *Italian*, Malese; *Spanish*, Malaya.
VARIETIES: Red, Black-red, White, Black.
CLASSIFICATION: Table.
COLOUR OF FLESH AND SKIN: Yellow.
COLOUR OF LEGS AND FEET: Yellow.
COLOUR OF EGG-SHELLS: Dark brown.

The older works on poultry gave greater prominence to the Malay fowl than is the case in more recent publications. At that time this breed was the giant

* 'The Poultry Book,' by Messrs. Wingfield and Johnson (London, 1853), p. 37.
† 'Poultry-Keeping as an Industry,' by Edward Brown (London, 1904), p. 26.

amongst domestic fowls, and for crossing purposes it was often used. Its influence, as already seen, is traceable in the Indian or Cornish Game, which breed has, however, taken its place in popular favour. Although it cannot be regarded as a breed desirable for other than ornamental purposes, it has qualities which cannot be ignored. Also, it is one of our few pure races.

Origin.—The evidences are that the Malay originated in South-Eastern Asia, whence it was imported directly to England, and where fowls of this type are common. Moubray* calls them the Chittagong or Malay, and describes them as an Indian variety; but India meant in those days practically all Southern Asia. Dixon† quotes from the 'Penny Cyclopædia' that this is an Indian breed, called by Europeans the 'Kulm' cock, but gives no evidence in support of that opinion. Ferguson‡ says that the term 'Kulm' is but another name for the Malayan class of fowl, and states: 'From the Peninsula of Malay, situated on the southern point of the continent of India,§ where this fowl still abounds, have been imported magnificent specimens of the Malay kind. To Mr. J. Nolan, of Dublin, a man of great experience and sound judgment, we are indebted for the extensive propagation of this very noble family. He was one of the earliest Malay breeders, having obtained his stock from the London Docks, to which place they had arrived direct from Malay. . . . That they were the aborigines of the Peninsula of Malay is unquestionable.' He also calls attention to the fact‖ that they were the largest known fowls until the arrival of the Shanghai or Cochin.

Doyle¶ calls it the *Gallus giganteus*, or large Kulm fowl, and says it is found in the Deccan country as well as the Malay Peninsula. This is confirmed by Colonel Sykes,** who found the Kulm cock domesticated on the Deccan; but he believed it was there introduced from Sumatra by the Mussulmans. In a French work†† a very wide distribution is given to this race, for it is stated that it is indigenous to the Malay Archipelago, to the Philippine Islands, that it is common in India, in Burmah, in the islands of the Indian Ocean, and on the eastern coast of Africa.

Mr. R. Whitfield writes:‡‡ 'Some years ago I had a conversation with one Captain Williams, who told me that he had brought many birds of this breed (Malay) to England, and that he had been all through India and the Malay Archipelago, but saw only a few specimens of them until he reached Singapore, where they were somewhat plentiful. He stated that the birds bred and fought in those islands were principally a shorter-legged, longer-bodied and feathered bird than the Malay, and would fight like demons; still the Malay was bred and fought largely.'

It may be accepted that the Malay originated in South-Eastern Asia, and that, when found elsewhere, it has travelled from its original habitat. Further, Mr. C. F. Montresor says* that he believes 'the Malay is no other than a cross from the Indian Game cock and Chittagong hen,' which he has bred on many occasions, and produced several that have been bought in Calcutta by stewards of ships and sailors, and have no doubt found their way to the dealers in the neighbourhood of East London, and there sold as Malays.

History.—We have no record as to when the first importations were made, but that these took place more than a hundred years ago is evident from the fact of the breed being mentioned by Moubray. No dates are given to the purchases made by Mr. Nolan. Colonel Sykes is said to have imported his first specimens in 1831, but they were known before then. Mr. Lewis Wright quotes† from notes supplied by the late Mr. Edward Hewitt, one of the most careful of the earlier poultry-breeders, whose recollections of the breed went back to 1830. In 1833 he purchased a pen of Malays at Liverpool. An explanation is afforded why the Malay was at first best known in Cornwall, where, and in Devon, there are still many breeders.‡ 'The western districts of Cornwall, especially around Falmouth, abounded some few years since with fowls of good Malay blood. Many of these had been landed there from the East Indiamen that were accustomed to make that town their port of call on entering the English Channel.'

It cannot be claimed that the Malay ever became popular, but at one period it was more used for crossing than has been the case of late years. Moreover, a great change came over the fowl. When first introduced, and for several decades afterwards, it was not nearly so long in the leg as now, and the feathers throughout were very narrow, in some cases barely covering the flesh. The modifications which took place have been in some measure due to change of conditions, but were probably rather the result of differing ideals. It would appear that crosses were introduced, and hence the type was greatly changed. To some extent breeding and fresh importations have brought the bird a little nearer to its original form,

* 'Practical Treatise on Domestic Poultry,' by Bonington Moubray (London, 1824), p. 21.

† 'Ornamental and Domestic Poultry,' by Rev. E. S. Dixon, M.A. (London, 1850), p. 299.

‡ 'Rare and Prize Poultry,' by G. Ferguson (London, 1854), pp. 182-183.

§ Malay is the southern point of Siam, not India.—E. B.

‖ 'Rare and Prize Poultry,' by G. Ferguson (London, 1854), p. 183.

¶ 'Domestic Poultry,' by Martin Doyle (London, 1854), p. 2.

** *Proceedings of the Zoological Society*, 1832.

†† 'Les Oiseaux de Basse-Cour,' par Ch. Cornevin (Paris, 1895), p. 157.

‡‡ *Feathered World*, October 11, 1895, p. 322.

* *Live Stock Journal Almanack*, 1888, p. 189.

† 'New Book of Poultry,' by Lewis Wright (London, 1902), p. 326.

‡ 'The Poultry Book,' by Wingfield and Johnson (London, 1853), p. 169.

but, as is the case with nearly all races of poultry, the chief advantage has been in the fixing of one type, even though it is not the same as that found at first.

Economic Qualities.—The appearance of the bird tells against it, and its pugnacious qualities—for it is cruel by nature—have made it a bird very difficult to keep in large numbers. It is also a poor layer, which lack has not been made up by any special suitability for table purposes. It is true that the flesh is good in flavour, though a little strong, and wonderfully abundant, considering the appearance of the fowl, but the heavy yellow shanks are not a recommendation upon the poulterers' stalls. These considerations have all combined to keep the breed in the background, and we question whether, under any circumstances, it is likely to become a really popular variety. But the breed has its admirable points, and it is a satisfaction to know that it has been maintained pure through all these years. The utilitarian value of the Malay is in its admirable crossing qualities. Its flesh is a little high in flavour for an uneducated taste, but when properly hung it makes a very fine dish. When crossed with some other suitable breed, the progeny forms a splendid table fowl. The eggs produced by this race are very rich indeed, and have thick shells. The hens do not make good mothers, and on that account are not generally trusted with maternal duties, though they make admirable sitters. The chickens should not be hatched much before May, for they are slow in feathering, and if hatched too early appear to feel the cold very keenly. They bear confinement well, and unless they did so it would be impossible for anyone to keep them, as only three or four will live peaceably together.

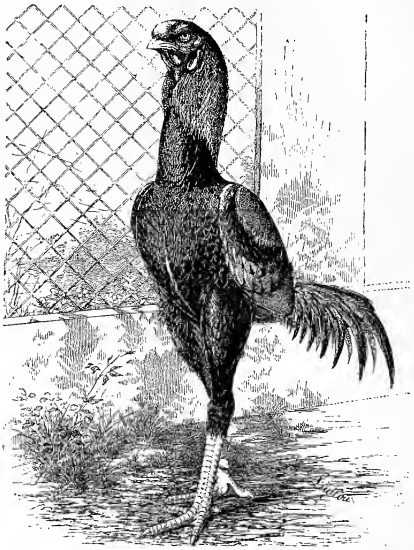


Fig. 22.—Red Malay Cock.

Description.—The Malay is one of our largest birds, and looks large in spite of its somewhat sparse amount of feather. It is broad and square in front of the shoulders, tapering to the tail, giving a wedge-like

appearance; the breast is deep and prominent, and the breast bone is usually bare, in which respect it differs from all other fowls; it is also often bare at the shoulders, which are very wide; the back is sloping and round; the wings are large and powerful, carried close to the body, and the tail short, drooping, and sickles very narrow; the neck and saddle hackles are narrow and scanty; the head is large and broad, with deep-set eyes and heavy overhanging brows, thus giving a very ferocious appearance; the comb is small and well in front, and shaped like a half-walnut; the neck is long and strong, and is bare on the throat; the legs and feet are heavily boned, giving the aspect of great strength; the thighs are muscular, and scantily covered with feathers. Weight: males, 9 to 11 pounds; females, 6½ to 8 pounds. The general appearance is that of a big, gaunt, powerful and pugnacious fowl.

Varieties—RED (Fig. 22).—These are generally red all over the body, with darker reflections.

BLACK-RED.—The head, hackles, back and wing-bow, are rich dark red; the wing-bar, breast, under-parts, and tail, glossy black.

WHITE and BLACK are self-coloured.

LANGSHAN.

NOMENCLATURE: In all countries, Langshan.
VARIETIES: Black, White, Blue.
CLASSIFICATION: General Purpose.
COLOUR OF FLESH AND SKIN: Grey.
COLOUR OF LEGS AND FEET: Very dark grey, pink between the toes.
COLOUR OF EGG-SHELLS: Dark brown.

Around this fine breed much controversy has arisen and a great amount of bitterness has been engendered, due to causes which it would be unprofitable to enumerate. On the one hand, supporters of the Langshan have claimed for it a combination of virtues which it has never possessed, and which are to be met with in no existent fowl, and have made ridiculous statements respecting it, ignoring even the very basis of natural development, whilst they have shown a sensitiveness to criticism which was most unfortunate. On the other side, for a long time opponents did not accord it justice, and blundered grossly by refusing to accept evidence which ought to have been sufficient, even though it was tainted by untenable assumptions. On both sides personalities were far too freely indulged in, and more lately breeders have destroyed its pre-eminent qualities by modifications which have ruined the type and made it little more than a monstrosity. Hence the Langshan has been unfortunate both in its friends and opponents, more especially the former. As we have to accept the fowl as it is to-day, it would be a waste of time and serve no good purpose to go over the controversial points, and attempt to summarize the acres of print which have gathered around this breed.

Origin.—The Langshan is undoubtedly a native of the Celestial Empire. Upon that point there can be no question, as the first importation, so far as we have records, was in 1872, sent directly from Northern China by a relative of the late Major Croad. It would appear from evidence which has gathered since that time that these birds are found in the Langshan district, to the north of the Yangtsze-Kiang River. A writer many years ago* quotes a letter from Mr. Jensen, of the Astor House Hotel, Shanghai, who had had a great deal to do with fowls and animals in China, in which he says:

'They [the Langshans] were not known in Shanghai before the opening of the Yangtsze to foreign trade (1862). The people who know them know nothing of their antecedents. There is nothing strange in this. Almost every district in China has its peculiar breed of domestic animals. Sometimes villages only a mile apart will have different kinds of goats, different kinds of pigs, different kinds of chickens. If you ask why it is so, they merely stop you with, "I don't know; it was always so." And thus it is with the black fowls from Langshan. No one knows when they came there or how they came there; they are peculiar to that district, and have been from time immemorial.'

This is to some extent contradicted by another writer,† who says that he met with them 600 miles up the Yangtsze at Hankow, and similar birds further north. That, however, does not disprove the place of origin, for the late Miss Croad stated‡ that 'the Langshan was strictly limited to the district of that name, and only found in other parts of China by importation. One gentleman with whom we opened a correspondence told us he had been in the Imperial Service of China ever since 1859, that he had travelled thousands of miles in the interior in all directions, and had never come across the Langshan in any other part except by importation. . . . He added that he and other residents in North China well remembered the introduction of the Langshan to the European community. Its date was fixed by the placing of a lightship outside the Langshan crossings in 1862.§ The officers and crew of the lightship, landing to explore and forage, came across this fine breed of fowls, and, as occasion offered, would send presents and birds to their friends in Shanghai.'

That Langshans have been purchased in other parts of China after the opening of that country to traders is evident, but the consensus of evidence is that they had been taken there, and is no more a proof as to actual origin than would the purchase of a Plymouth Rock in England or an Orpington in Hungary indicate that these were the native countries. A further letter may be cited in proof of the place of origin, written in 1877

* *Poultry*, April 16, 1886, p. 180.
† Mr. G. W. Gedney, *ibid.*, June 11, 1886, p. 270.
‡ 'The Langshan Fowl,' by A. C. Croad (London, 1889), p. 64.
§ These crossings are at a wide part of the lower river. —E. B.

by Mr. Annatoyn, inspector of the Langshan Lighthouse, who says :*

'The Chinese keep no record of stock of any kind, and of all my inquiries of the Chinese they tell the same story : that the fowls are a breed peculiar to that one particular place, and that the breed is dying out very fast. . . . They are only to be found in the Langshan district, and only in a small section of that. They are not known South in Canton, Foochow, or Ningpo, or North in Chefoo, Tientsin, or Pekin, nor were they known at any part on the Yangtsze as far up as Tchang. If they had been brought up from Cochin China or Burmah, it is more than likely they would have been brought up in the trading junks, and, of course, would have been known round those ports and bred there ; or if they had been brought overland, they would most surely have been known in cities on the route or important trading places.'

With these facts and others of a similar nature we must necessarily be content, as there is no proof as to when or how the Langshan originated. At first it was confounded with the Black Cochin, for which there was some excuse, as there was a great similarity between the Cochins, or Shanghais—as they were at first called when introduced—and the Langshans in 1872. This is clearly proved by the illustrations given by Mr. Lewis Wright † representing the Cochin in 1853 and the original Langshans. Both were upright birds, with single combs, somewhat fully feathered, and with feathers on the legs, the last-named feature being as much developed in one as in the other. But in respect to an importation made by Mr. Thompson, of Aberdeen, in 1877, it is stated ‡ that about a quarter of the birds were clean legged, the rest being very light feathered. The excessive feathering now found on the Cochin is the result of breeding in this country. Whilst the external differences were, however, slight, there were considerable variations in other respects, more especially that the Langshan showed a tighter feather, a fuller tail, and the skin was white or grey instead of yellow, as in the Cochin, which, so far as we know, never had the dark legs of the Langshan or the pinky colour of skin between the toes.

We cannot personally remember the original Black Cochins, our first knowledge of them being about the same time as the Langshan was imported ; but we have always held the view that as the Langshan was crossed into the Black Cochin, with manifest advantage to that variety, it is more than probable the first Black Cochins were probably either pure or half bred Langshans, but crossed with Cochins here, and bred to that ideal. Further back we are unable to go. The Rev. C. W. Hamilton has suggested § that Temmick's *Gallus morio*, or Negro fowl, which was black, with silky feathers, and had been domesticated for generations, was crossed with the bronzed jungle-cocks found in China, and from that mating came the Langshan. That is pure speculation, and it is just as possible that both the Cochin and the Langsban have a common ancestry, for the differences are not greater than might be looked for if the progeny were bred for a long period of time with different ideals and under different conditions. The two breeds, however, are now absolutely distinct. That the Langshan has been bred as a pure race for a long time is unquestionable. Its prepotency is remarkable.

History.—As already mentioned, the first recorded importations of Langshans were in 1872, followed by many others, for they soon became popular. These early importations varied very considerably, and were not in the hands of skilled breeders, who would have selected one type and bred to it. For a time there was a distinct tendency to the Cochin type, and birds from the same flock were shown as Black Cochins and Langshans. Gradually the question resolved itself as a distinct form was selected, giving scope to the special characteristics of the breed. This was round in body, fairly tight in feather, brilliant in plumage, and slightly feathered on the legs and feet ; in fact, with a close resemblance to the Black Orpington of to-day, save that the latter is clean on the leg. It was this form which won it so much favour with exhibitors and practical poultry-keepers alike. For a time it appeared as if it would become the leading General Purpose fowl, both at home and abroad, as it was received most favourably in France and the United States of America.

Then came the introduction of the Black Orpington, which was acknowledged to be half Langshan, and was frequently called a 'clean-legged Langshan.' With the exception of being a little rounder in body and shorter in the leg, the differences were few. But, unfortunately, the exhibitors of Langshans began, about 1889, to change the type, with the object of getting away from the Orpington, and bred for length of leg to such an extent that the exhibition Langshan is now a leggy monstrosity, stilty, often weak-legged, but naturally heavier in bone and smaller in body than of yore, more following the Indian Game. It has been claimed that the blood of the last-named breed has been introduced, but of that we have no evidence.

The result has been disastrous in Britain. For practical purposes it is scarcely ever bred, and we could not advise anyone—in spite of the quality of the egg, to be afterwards noted—to adopt the modern show Langshan as an economic fowl. Fortunately, a few breeders have refused to be led away from the older type, and as we write an attempt is being made to bring forward again what is known as the Croad

* *Poultry*, April 16, 1886, p. 179.
† 'The New Book of Poultry,' by Lewis Wright (London, 1902), pp. 243, 283.
‡ *Poultry*, June 18, 1886, p. 287.
§ *Ibid.*, March 5, 1886, p. 107.

Langshan. In America, also, breeders have adhered more closely to the form first introduced, and there should be plenty of material on both sides the Atlantic to work upon.

Economic Qualities.—Without committing ourselves to all the claims which have been made on behalf of the Langshan, there can be no question that it is a most valuable breed for practical purposes. It is very tame, adapts itself to either confinement or full liberty, and under favourable conditions thrives very well. But experience has shown that it is more suitable to sheltered positions and to kindly soil than to the colder and more exposed districts, as it lacks the vigour and activity necessary to combat piercing winds or harsh land. Hence, upon rich pastures, where there is plenty of sunshine and shelter, it does well; whereas on the bleak hills and wind-swept tablelands of the North it has not won the favour extended to it in the Southern and Western portions of Britain.

It is important to remember that fowls must be adapted to their conditions as must larger stock. More especially is this seen in the chickens, for the difficulties of rearing may be greatly increased if the environment is unfavourable. But given suitable conditions the Langshan thrives well, though it cannot be regarded as a quick grower. The hens are splendid sitters and mothers, and they are most faithful in attention to maternal duties. They are good winter layers, but, taking the total number of eggs produced

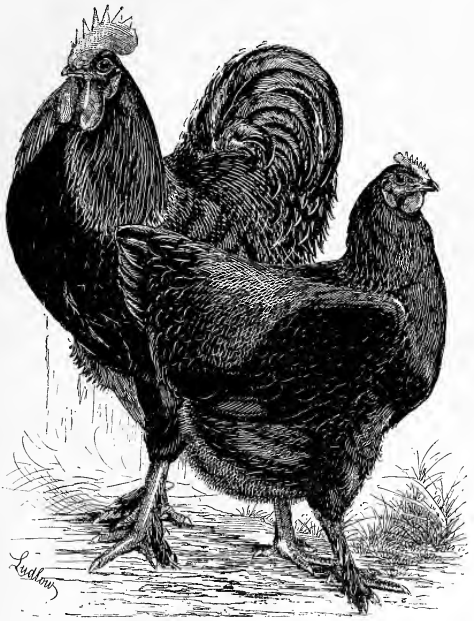


FIG. 23.—BLACK LANGSHANS.

per annum, they will not nearly reach the average of many other breeds. The eggs, however, are very rich, and although, like those from all Asiatic fowls, they are not large in size, yet they meet the market requirements, more especially when we bear in mind the beautiful tint of shell—a dark rich brown. Some years ago the manager of a large London dairy company said that he could sell Langshan eggs at 6d. per dozen more than those from any other fowls. We doubt whether that is true now; but these eggs are always sought after for table purposes, and as the shells are strong, they keep well. The skin is fine, and the flesh fine in texture, though grey in colour, but for first-class table poultry they carry too large a proportion of flesh upon the thighs. The meat is, however, good in quality. Apart from the number of eggs produced, this is one of the best of our General Purpose breeds. Reference has been made to the remarkable prepotency of the breed, which stamps its characteristics upon the progeny when crossed with other races to a remarkable extent.

Description.—Those who desire to breed modern exhibition Langshans can study the points accepted by fanciers, and see for themselves the type adopted for the show-pen. But as our object is to develop the economic qualities of the different races, we prefer to describe the older form, and fortunately specimens are still available. It is to be noted, however, that the Langshan was always an upright fowl, tall, without showing too much of the leg, but large in body, fairly long and wide, yet without the massiveness met with in the Cochin, Brahma, and Plymouth Rock; breast deep and long, carried well forward; back rather long and sloping, with the tail rising sharply therefrom; the head small in comparison with the size of body, full over the eye, and carried well back; beak light to dark horn, the latter for preference; comb medium in size, single, carried upright, evenly serrated, and fine in texture, which with the face, earlobes, and wattles—the latter small—are a brilliant red; eyes large, bright, and sparkling, brown to dark hazel, with black pupil; neck long and well arched, covered fully with long hackles; wings medium in size, generally carried well up; tail full, with abundant sickles—in which respect the Langshan differs essentially from the Cochin and Brahma—and carried high; legs medium in length, standing wide apart, well feathered on thighs, but with no sign of vulture hocks, and the shanks slightly feathered on the outer side and also the outer toes, which are four in number on each foot, and are long and straight. It is most important that the bone should be fine; the shape of the bird is graceful, sprightly, and active, giving the appearance of nervousness; the feathers are close to the body, and very brilliant in sheen. Weight: males, 8 to 10 pounds; females, 6 to 8 pounds. Many of the modern type are coarse in comb and bone, betokening a loss of that fineness of skin and flesh which should be sought for.

Varieties.—Some of the advocates of the Langshan have claimed that the single-combed Blacks alone are pure, but that statement is not supported by the evidence obtainable. At any rate, it would be comparatively easy to occasionally find white sports. The Rev. C. W. Hamilton* states that in Langshan there are three classes of Black fowls—the single-combed, the rose-combed, and the crested. Mr. Harrison Weir says† that he had met with Mr. Frank Saunders, who had lived in the Langshan district for over two years. 'I asked him if he knew the breed in China, when he said that he not only knew the Black Langshan, but kept no others when there.' This gentleman said that he had seen large flocks of White Langshans, and also that some strains had small topknots, thus confirming what has been quoted from Mr. Hamilton.

Black (Fig. 23).—This has remarkable brilliancy of plumage, with a beetle-green, almost iridescent gloss. The legs and feet are of a dark slate colour, tending to a lighter shade as the birds become older, with the skin between the toes, and feet pink.

White.—The first Whites in this country were a sport from the Blacks. The plumage is a pure white, with a silvery sheen; the legs and feet are a light grey, and the toenails and beak white. They are very beautiful, but scarce.

Blue.—This appears to have been produced by crosses between the Black and White Langshans in America, but as this is an unnatural colour in fowls, they are very difficult to breed. The plumage is a slaty-blue, each feather laced with a darker hue of the same colour; the legs are a medium grey, darker on the front; beak horn colour; toenails white.

JAVA.

Nomenclature: The term Java is used in nearly all countries; *Dutch*, Zÿdehoen; *Hungarian*, Javai.
Varieties: Black, White, Mottled.
Classification: General Purpose.
Colour of Flesh and Skin: Yellow.
Colour of Legs: Black, with a tendency towards willow in Blacks; willow in Mottles, and blue-yellow in Whites.
Colour of Egg-shells: Brown.

In this case also we have a breed which has not attained great popularity, but it has proved useful in other ways, and for that reason must be included.

Origin.—Considerable discussion has taken place as to whether the Java is an Asiatic or an American breed. A writer in an American journal‡ stated: 'The stock

* *Poultry*, May 28, 1886, p. 246.
† 'Our Poultry,' by Harrison Weir, F.R.H.S. (London, 1902), vol. i., p. 424.
‡ *Farm Poultry*, November 1, 1903, p. 418.

I had forty years ago was hatched from eggs coming from Java, which I knew were imported from England'; and further that 'the Java fowl, as bred forty years ago from imported stock—known to have been imported, and also known to have come from the East Indies—was, and is, about the same fowl as bred to-day.' As against that statement must be placed one which appeared twenty-two years previously,* in which it was claimed that 'the Java fowl is not a Java fowl at all, but another product of American fanciers—an American breed.' As to the Blacks and Whites, there is no evidence of origin; but that the Mottled Javas were produced in America is clear. Taking, therefore, the Black and White Javas as an existent fact, it would not be difficult to obtain Mottled specimens by crossing. Other influences, however, appear to have been introduced, for it is stated † that they were produced by crossing a Black Java cock on White Brahma hens. But it is evident that given Black and White Javas it would be easy to produce Mottled specimens; in fact, an old breeder ‡ claims that they were thus obtained.

History.—It is claimed that the Black Java was first known in America in 1850, and that § they were bred to a considerable extent in one section of New York State forty years ago. The first importations into Britain, so far as we can trace, were in 1885; but on neither side the Atlantic have they secured any measure of popularity.

Economic Qualities.—Breeders claim that the Java is an excellent winter layer of rich brown eggs, but no comparative figures have been given. We should, however, from the appearance of the fowls, be prepared to accept this statement. They are fair on the table, in which respect the evidence is not strongly in their favour. The hens are excellent sitters and mothers, and the chickens, whilst hardy, active, and easily reared, do not grow very quickly. We have here an explanation why the breed has not attained greater popularity.

Description.—The Javas are large-bodied fowls, with a deep and full breast, broad back of medium length, and abundant saddles; head of medium size, with black or nearly black beak, and dark brown eyes; face and earlobes red; comb small, single, and carried upright, and well cut; neck of medium length, and well arched; wings medium in size, and well folded; tail carried rather upright, with long sickles in the cock; the legs are large, strong, and of medium length, stout in bone, unfeathered, with four toes on each foot. Weight: males, 8½ to 10 pounds; females, 6½ to 8 pounds.

Varieties — Black.—The chief characteristic of the Blacks is the brilliant sheen on the plumage, which is of a bright black. This led to the opinion that either the Langshan was the progenitor of or a descendant from the Java. But there is no evidence in support of such a theory. The legs and feet are black or nearly black, with a tendency to willow, and the bottoms of the feet yellow.

White.—In these the colour is pure white throughout. The legs and feet are willow, and the bottoms of the feet yellow.

Mottled.—These birds have not been bred carefully enough to secure the evenness of mottling desired. The wings, tail, and sickles are broken black and white; the body plumage and hackles should be black and white evenly mixed; legs and feet bluish-yellow, with the bottoms of the feet yellow.

* *American Poultry Bulletin*, May, 1881.
† *Ibid.*
‡ *Farm Poultry*, November 1, 1903, p. 418.
§ *Ibid.*, p. 413.

ASEEL.

Nomenclature; Aseel in nearly all countries; *Hungarian*, Aseelsi.
Varieties: Several.
Classification: Table.
Colour of Skin and Flesh: White or yellow.
Colour of Legs and Feet: Various.
Colour of Egg-shells: Tinted.

This breed is not to be recommended to practical poultry-keepers, but, as we have seen in connection with the Indian Game, it has considerable value for crossing and out-crossing, and it is probably one of the oldest races we have. Hence it must be included.

Origin.—From such evidence as is obtainable, the Aseel has been bred in India for many generations, chiefly by the rulers of that country, for fighting purposes, as it has practically no other use. As to the process of development we have no definite account. Mr. Lewis Wright says:*

'There can be little doubt that the birds whose battles are alluded to in the "Institutes" of Menu, 1,000 B.C., if not the Aseel, as now known, were at least their ancestors, and that the present race has been either maintained or gradually evolved, with express reference to combat, during a period of almost 3,000 years.'

Mr. C. F. Montresor, late of His Majesty's Bengal Civil Service, thus refers † to its cognomen:

'This is the name by which the breed is known and styled in India, and has been adopted in England for some years in order to distinguish it from that which is designated "Indian Game" (a breed not known to the natives of India), and originated in England by the late Sir Walter Raleigh Gilbert upwards of sixty years since, when he imported from India some Red Aseel into Cornwall, and there crossed them with the

* 'The New Book of Poultry,' by Lewis Wright (London, 1902), p. 330.
† *Poultry*, December 27, 1895, p. 66.

Derby Black-reds. Sir Walter (then General) Gilbert personally gave me this information in 1846. The word "Aseel" (Arabic) is an adjective, signifying thoroughbred, high-caste, pure, original, and has no plural, as in our English word "Game." Thus Aseels

than 100 years ago.* 'Several well-known men have imported them—notably Lord Clive—and certainly on one occasion they have been considered a worthy present to an English monarch, for a cock was sent to George III., who had him depicted on canvas by

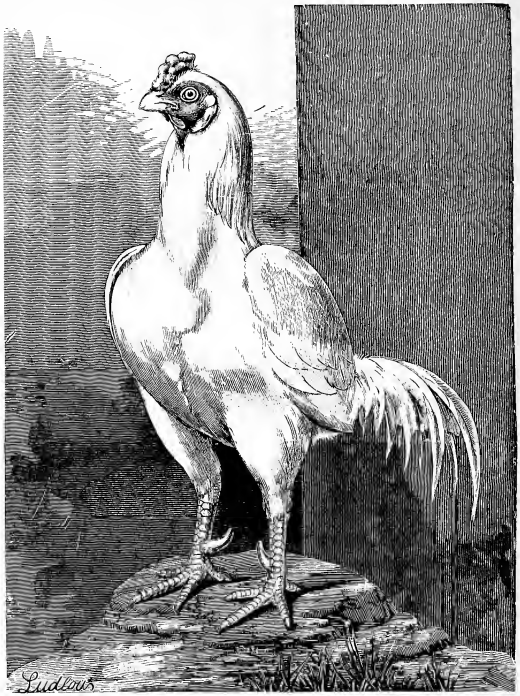


FIG. 24.—WHITE ASEEL COCK.

and Games are a perversion of grammar and nomenclature.'

History.—Bred in India for many generations, these birds became known to our countrymen after the occupation of that dependency by the British. It is stated that they were introduced into Europe more

Reid.' About sixty years ago the late Sir George Gilbert made further importation into Cornwall. For reasons afterwards stated, they have never become popular, nor is that result likely to be achieved, as they are like the Kilkenny cats, and will fight until hardly a feather is left.

* *Stockkeeper*, October 9, 1891, p. 330.

Economic Qualities.—The Aseel could not be regarded as a first-rate table fowl, due to the hardness of its muscle, but excellent results are obtained by crossing with soft-fleshed races. The hens are poor layers, though the eggs are rich, and they are splendid sitters and mothers. This breed is a fighter, that is all, and their courage is remarkable.

Description.—The body is small, short, and broad, the breast broad and flat, and the back slopes from the shoulders, which are very wide, to the tail; the flesh consists of hard, wiry muscle; the head is broad between the eyes, and deep, with strong beak, slightly curved; the eye pearl-white or pink, very prominent, lustrous, and clear; the comb is small, and pea in shape; the wattles small and hard; the neck is shortish, thick, strong, and almost devoid of flesh; the wings are carried very close; the legs are stout, the shanks flat, and the feet firm, with four toes; the plumage is scanty, hardy, and smooth, and the tail feathers tapering to fine points, and carried low. Weight: males, 6 pounds; females, 5 pounds. The sprightly carriage is the leading characteristic of this breed.

Varieties (Fig. 24).—There are many colours, but we cannot do better than again quote Mr. C. F. Montresor;* 'With regard to colour, no estimation is or has ever been placed, and on the reasoning that "no good horse was ever a bad colour," so no preference has ever been given or dependence placed on it.' There are Blacks, Black Spangles, Reds, Red Spangles, Duckwings, Greys of all shades, Piles, Whites, Speckles, and Mottles. Mr. Montresor says that all the White Aseels in England are descendants of a Black hen he imported, mated with a Black-red cock presented to him by the late King of Lucknow, and that the Whites are better in colour here than in India, in great measure owing to their not being exposed to a hot sun.

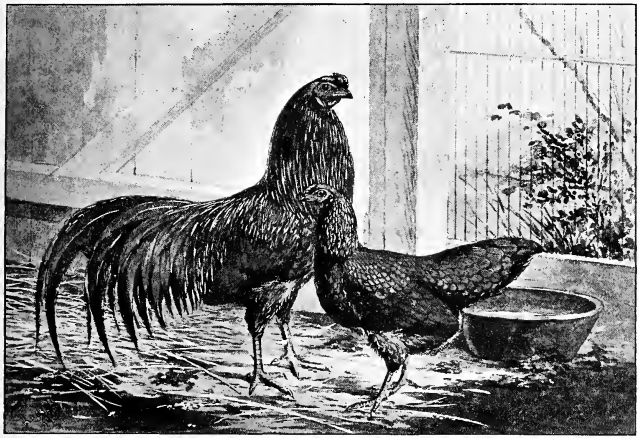


FIG. 25.—BLACK SUMATRA.
Bred by Mr. F. R. Eaton, Norwich.

BLACK SUMATRA.

NOMENCLATURE: In all countries, Sumatra.
VARIETY: One.
CLASSIFICATION: Table.
COLOUR OF FLESH AND SKIN: White.
COLOUR OF LEGS AND FEET: Dark olive or black.
COLOUR OF EGG-SHELLS: White.

Origin.—In this instance we have satisfactory evidence as to the origin of the Black Sumatra, which proves that the nomenclature is correct, for Mr. J. A. C. Butters, writing to Dr. John C. Bennett, one of the first breeders of the variety in America, states, under date of March 20, 1851:

* *Live Stock Journal Almanack*, 1888, p. 191.

'I received two hens and one cock of this breed direct from Angers Point, island of Sumatra, India, April, 1847. These fowls are found there in flocks of twenty or more, and fly across from the island of Sumatra to the island of Java. The natives call them "pheasants," and are very choice of those they capture and breed. They are kept almost exclusively for fighting.'

It is explained that the reason given for calling them 'pheasants' is their resemblance, in the length of the tail and the horizontal manner in which it is carried on a line with the body, to the common pheasant. The statement here made is confirmed in other ways. Mr. Lewis Wright,* in the first edition of his well-known work, describes the breeding of fowls for cock-fighting in the Eastern Archipelago, and gives a plate, after a native Chinese artist, of what is called the Ayam Jallak fowl, meaning Green fowl, which is in all points except colour of plumage, for there is a good deal of silver white, similar to the Sumatra as we know it. He quotes from Mr. Montresor that this type of fowl 'springs largely from the Jungle-fowl, which abounds in the Malay Peninsula, and also in Sumatra.' It is not improbable that the Sumatra and the Malay both own the same ancestry, but have been bred on different lines, more especially as to length of neck and leg. It may fairly be assumed that the Sumatra is a pure race, and that its habitat was the islands of the Asiatic Archipelago, not merely Sumatra itself.

History.—As already seen, the Sumatra was imported into America in 1847, where it met with a moderate amount of favour, more especially among devotees of the sport of cocking. Perhaps, but for the fact that about the same period cock-fighting was made illegal in the United Kingdom, it might have received attention here. Our connections with India have been so intimate that when fresh blood was desired it was obtained direct. At first the breed was known under various names — Sumatra Pheasant Game, Sumatra Game, Sumatra Ebon Game, Java Pheasant Game, Malacca Game—but gradually that placed above was adopted. It was known and bred sufficiently to be included in the Standard published by the American Poultry Association. Until 1902, so far as we have been able to trace, no specimens had been introduced into Britain; but in that year Mr. F. R. Eaton, of Norwich, imported a pen, since which time they have been taken up by several breeders, and a club formed in support, more, however, as an exhibition fowl.

Economic Qualities.—Wherever a breed of fowl is bred for fighting, we may assume forthwith that it will be good in meat qualities, due to the development of the muscles upon the sternum for the movement of the wings. That is the case with the Sumatra, which carries a large amount of flesh, although rather hard, requiring to be well hung after killing. The hens are good layers of somewhat small, white-shelled eggs. The latter point is most interesting and suggestive. We have seen that all the Asiatic races of recent importation, together with the breeds produced therefrom, lay tinted-shelled eggs, in some cases the shells being deep brown. The Sumatra is an exception for which there is no explanation. It would appear to confirm what has been suggested by naturalists, namely, that the wild Jungle-fowl laid white-shelled eggs, and there has neither been the protective influence at work or artificial selection to cause change in that respect. The hens make splendid sitters and mothers, most faithful in defence of their offspring. The chickens are hardy and easily reared, but are somewhat slow in reaching maturity. It is yet too early, and our opportunities of observation are too limited, to determine the value of the breed for utility purposes, but our opinion is that they are unlikely to come into general use, and that their great benefit will be found in crossing for table properties. At present the body is rather small, probably due to inbreeding, but that can be remedied by selection as the number of breeders increases.

Description.—The following is taken from the Standard recently issued by the Black Sumatra Game Club, and follows closely on the lines adopted in America: Body long, firm, and very muscular; breast broad, full, and rounded, with straight keel; back of medium length, broad at shoulders, and very slightly tapering to the tail; wings strong, large, and long, carried close to body; neck rather long, well arched, and abundantly covered with long hackle, the saddle-hackle also full; head small, rather short, and round; beak of medium length, very strong, and slightly curved, dark olive or black in colour; eye, large and very bright, dark red in colour; comb of pea shape, low in front, fitting close to head; face smooth, fine in texture; wattles small, red in colour, as are the earlobes; the tail is very long and drooping, with a large number of sickles and coverts, which should rise slightly above the stern and then fall streaming behind in the cock, almost touching the ground; thighs of medium length, thick, strong, and muscular; shanks also medium in length, strong in bone, and straight, set well apart, and dark olive or black in colour. A peculiarity of this breed is that the cocks are often double spurred; feet broad and flat, four long toes, and with the legs dark olive or black; the plumage is of a very rich, glossy beetle-green or green-black, with bright sheen; in general shape and carriage they are long, straight, and upright, giving a forward and stately appearance. Weight: males 5 to 6 pounds; females, 4 to 5 pounds.

Varieties (Fig. 25).—There would appear to be other colours, but the Black is generally preferred.

* 'Book of Poultry,' by Lewis Wright (London, 1874), pp. 297-298.

CHAPTER V

ITALIAN RACES OF FOWLS

Leghorn
Ancona
Valdarno
Polverara
Padovana
Maggi

FOR nearly twenty-five centuries the domestic fowl has been known in Italy, and it is probable that the ancient Romans were among the earliest peoples to recognise its value for food purposes. Cicero, Varro, Columella, and Pliny refer to it in their various works, the two last named specially mentioning its practical value. The suggestion is made, as we have already seen with a considerable amount of probability, that the Romans introduced the Dorking into Britain. In the neighbourhood of Florence we have seen fowls which in coloration of plumage and shape had greater affinity with the Dorking than those met with elsewhere, but even these could not with the greatest stretch of imagination be regarded as related to the English Dorking. In Northern Italy larger birds are to be met with than elsewhere in the Peninsula. They are due to importations of other races, for that is the most progressive portion of Italy. Generally speaking, the Italian fowl of to-day is light in body, sparse in flesh, longish in leg, and partaking largely of what we know as Leghorn or Mediterranean character. This is due to the conditions of the country, which, with its intense heat, is not conducive to the production of flesh, and during our visit to Italy we did not see a really good table fowl, though the birds were scarcely so small or tasteless as in Spain.

In the rural districts, with one or two exceptions, breeding upon scientific lines is practically unknown. Italian farmers pay little attention to their fowls, and there is consequently a great lack of uniformity. Such as there is may be due to natural influences rather than to careful selection. At the same time, on both sides the Apennines, from the Adriatic to the Mediterranean, from the Campagna almost to the Alps, whilst the variety of colours is very great, nearly all the fowls met with partake largely of the same character. And it is a very interesting fact that the Leghorns, taken in the first place to America, the Italians carried to Denmark nearly twenty years ago, and the vast numbers which were imported annually from Italy into Belgium as layers, are all equally of one form, differing in some respects, more especially in colour of plumage, but recognisable as of the same family.

We have already referred to the great uniformity of type met with in the countries on the northern shores of the Mediterranean Sea. It is not improbable that the fowls met with in Spain, France, Austria, and Hungary, originated in Italy, as intercommunication either by land or sea since the time of the Roman Empire has been constant between the last-named country and the others. We shall note other breeds than the Leghorn met with in Italy, but they are comparatively few. From a poultry position there is much land yet to be explored, and it may yet be found that other varieties exist unknown beyond a limited circle. With the exception of Piedmont, Lombardy, Venezia, Emilia, and Ancona, very little attention is paid to fowls, and even in those provinces the methods adopted are very crude.

LEGHORN.

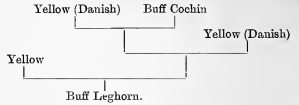
NOMENCLATURE: *English*, *French*, *Spanish*, Leghorn; *German*, *Dutch*, Italiener; *Danish*, Italiénere; *Italian*, Italiana; *Bohemian*, Leghornky; *Hungarian*, Olasz.
VARIETIES: White, Brown, Black, Buff, Cuckoo, Pile, Duckwing, Mottled.
CLASSIFICATION: Non-sitting.
COLOUR OF FLESH AND SKIN: Yellow.
COLOUR OF LEGS AND FEET: Yellow.
COLOUR OF EGG-SHELLS: White.

Origin.—So far as we have been able to trace, there is no definite information obtainable as to the origin of the Leghorn fowl, as we call it, or the Italien, as it is named in several continental countries, except that this is the common fowl of Italy. But its

characters have been fixed in America and Britain by selection, and modifications have taken place in the last-named country. A suggestion has been made that the Leghorn is the old Roman fowl, but upon what evidence is not stated. Fortunately, records are available which prove the place of origin, and the fact that birds of this race are to be met with throughout Italy confirms our knowledge. When Leghorns were first imported it was commonly stated that they were produced by crossing Black-red Game with White Minoreas, and nearly thirty years ago a well-known authority said to the writer that he could breed as many as were required. When he was invited to do so, he wisely refrained from further observations of a like character. Had he made inquiries in Italy, he could have proved that the Leghorn or Italian fowl was known, and had been for generations.

So much is true as to the general origin of the Leghorn. It would appear that Whites, Browns, and Blacks were taken direct to America from Italy, and that these colours and Yellows were exported to Denmark, for all of them, and also Cuckoos, may be seen in their native land. During a visit to the Leghorn district in 1903 we met a gentleman, Signor Boshart, who at one time owned a considerable poultry establishment. He stated that whilst all colours of Italian fowls are to be met with, very little attention is paid to colour, but if there is any preference on the part of the Tuscan peasants, it is in favour of Blacks, as they are thought to be the most profitable. At the same time, the majority of fowls kept are more in the direction of Browns and Whites, with such intermediate colours as might be expected. The majority of Leghorns in Italy have yellow legs, but by no means the whole of them, as we have seen many with slate-coloured legs. One point upon which we were anxious to obtain information was with respect to the maternal instinct. With us the Leghorn is a non-sitter, but in Italy that is not the case to the same extent. It is only a moderate sitter, and the statement made was that not more than 20 per cent. of the hens become broody. Still, those twenty out of every hundred are sufficient to continue the race. Selection would speedily eliminate the tendency, slight though it was, to maternal duties.

It is evident, therefore, that White, Brown, Black, Cuckoo, and Yellow Leghorns are to be found in Italy; but since their introduction into Britain the White Minorca has been outcrossed into the White Leghorn, Black-red Game into the Browns, and Black Minorcas into the Blacks. In respect to these crosses we speak below. But the Buffs now seen have had a different origin, owing their colour largely to Cochin blood. Mrs. Lister Kay, the most successful breeder of Buffs in this country, in 1888 imported several Yellows from Denmark, but they were faulty in colour. The cock was crossed with Yellow hens and also with Buff Cochins, and the latter gave the desired colour. A full account of the matings are given by Mr. Harrison Weir,* but may be summarized in the following table:



It may be explained that care was taken to select as good-coloured birds as possible, that there was a measure of inbreeding, and that it required four years to secure satisfactory results, by which time there was only $\frac{1}{32}$ of the Cochin blood remaining. From that time onward no alien blood was introduced.

Pile Leghorns were produced by Mr. George Payne, of Woking, by crossing Whites and Browns. The production of this pretty fowl took four years, but Mr. Payne's account† of his ringing the changes between the two varieties is very interesting. His success was all the more satisfactory as it was achieved without the use of alien blood.

Duckwings were also bred in Britain, but the actual origin has never been revealed. The name, as in Game similarly termed, is given because the wing-bar is the same as in the Mallard, or wild duck. It would appear that Pile-bred pullets of a slaty body colour were bred to a Phœnix (Japanese) cock, but how they were mated we cannot tell. This is the explanation why Duckwings have been less true to Leghorn type than any other variety, good though they are as layers.

History.—As already explained, the Leghorns were taken in the first instance from Italy to America, and it was through the last-named country that they became known to British breeders. The earliest record is that‡ 'about 1835 (the exact date is not known) Mr. N. P. Ward, of New York City, received from Italy a few Brown Leghorn fowls, which in his hands undoubtedly proved their claims to superior merit; for, though he wrote nothing which has been preserved about them, he gave eggs and fowls to his friends, one of whom was Mr. J. C. Thompson, of Staten Island. . . . At a subsequent period Mr. Thompson, who seems to have been a most enthusiastic fancier, sent by his son-in-law, who was a sea-captain, for an additional supply of the fowls, and received birds that had the same markings as those first imported, and exhibited the same precocity.'

In the first edition of Wright's 'Book of Poultry'§

* 'Our Poultry,' by Harrison Weir, F.R.H.S. (London, 1902), pp. 512-513.

† *Fanciers' Gazette*, November 12, 1898, p. 689.

‡ 'The Brown Leghorn,' by H. H. Stoddard, Hartford, Connecticut, 1885, pp. 10-11.

§ 'Illustrated Book of Poultry,' by Lewis Wright (London, 1874), pp. 425-426.

is quoted a letter from Mr. F. J. Kinney, of Worcester, Massachusetts, who says:

'The first [Brown Leghorns] I ever owned I bought on board a ship in Boston Harbour in the spring of 1853. This was the first trio I ever saw, and I believe them to be the first ever brought to America. I have since had two other small lots from the city of Leghorn, in Italy, and expect more soon from the same place. The first trio weighed 9¾ pounds, and were yearlings. Their combs and wattles were very large and coarse; earlobes entirely red, same as face, comb, and wattles. They were not Black-red Games nor Black-red Leghorns, but Brown-red—*i.e.*, the cock's breast was dark brown, spotted with lighter brown, the dark brown running up the under side of the neck; his hackle was light brown, striped with black.'

Mr. I. K. Felch, the well-known American breeder, says* that the first importation took place in 1853, but that subsequently crosses were made with Spanish and Black-red Game, and that it was owing to the Spanish influence the white earlobe was secured. That may be correct of some strains, but is denied as to others. It may be explained that our inquiries in the Leghorn district showed more variety in the type of fowls met with around that city than in the centre of Tuscany, and the name was given because it was the port of shipment. A ship's-captain would be unlikely to care whence they were obtained. In the same way Leghorn hats are so called; they are not made there, but about forty miles away.

With regard to White Leghorns, it was supposed that these were simply sports from the Browns, but, as stated above, they are to be met with in Italy. Further evidence has recently been given by Mr. A. C. Acker, of Mount Kisco, New York, U.S.A., who writes† that his father was a fruit and produce dealer in New York in 1840, living outside the city. When he saw fowls that he thought would please his wife, he bought and sent them home. His business was such that most of the sea-captains had dealings with him, and he with them. The last fowls he obtained from one of the captains of a tea ship, between 1840 and 1845, and he sent home one White cock and several hens. They were layers from the start, in size near a Minorca. Finding them such layers, the other breeds were sacrificed, and only the white birds kept. From the few specimens procured came what are known as the White Leghorns. Mr. Acker says:

'They were so named by my mother, from their drooping combs when in good condition and laying, after what was then known as the Leghorn straw [hat], a straw imported from Leghorn, and greatly worn by both ladies and gentlemen.'

* 'Poultry Culture,' by I. K. Felch (Chicago, 1886), p. 232.
† *Reliable Poultry Journal*, Quincey, Illinois, U.S.A., November, 1893, p. 335.

It is stated by Mr. L. C. Verrey,* on the authority of Mr. H. H. Stoddard, that Black Leghorns were introduced into America, in the autumn of 1871, by Mr. Reed Watson, of East Windsor Hill, Connecticut, and that 'in 1878 he got from Italy a cock near to perfection, from which he bred a fine flock, the best he ever had.'

The first Leghorns seen in Britain was a pen of Whites imported by Mr. W. B. Tegetmeier, and a little later a further lot were sent over for portraiture in the 'Illustrated Book of Poultry.' In 1872 came the first lot of Browns, imported by Mr. Lewis Wright for the same purpose. Our first acquaintance with the Leghorns was in 1875, when we obtained some eggs from Mr. A. Kitchen, who had taken up the breed with great enthusiasm. Later in that year we imported a trio from America, winning a cup at the Crystal Palace Show the following November. Very speedily the fowl commanded a large amount of favour, both for exhibition and practical purposes, and in 1876 was established the Leghorn Club, the first specialist poultry club in this country. Since that time the breed has held its position, but more in the latter than the former direction, and it has been distributed in all parts of the earth. English-bred birds have been sent to Italy to improve the native races.

In the early eighties the Danish Poultry Society, as part of the movement for the improvement of agriculture, and with the definite object of egg production in view, promoted an inquiry as to the breed most suited to the conditions of the country, and as a result the Italien, or Leghorn, as we call it, was chosen. The results are seen in the remarkable development of the Danish egg trade. In 1885 we attended an exhibition at Copenhagen, where we saw colours and varieties unknown to us before. It was that exhibition which led to the efforts to secure Buff Leghorns, already referred to. There were on display Browns, Whites, Partridge, Blacks, Cuckoos, Dappled Greys, and Yellows or Buffs—upwards of 500 Leghorns in the pens, probably the largest collection of one breed ever seen.

Economic Qualities.—The qualities of the Leghorn are great precocity and excellent laying properties. The breed is excellent in egg production, but, taking weight of eggs into account, it is excelled by the Minorca. It is, however, superior to the Minorca in quickness of growth, adaptability to conditions, and vigour of constitution. This is greatly in their favour, as it enables them to be kept under conditions where they are exposed, and their active habits mean that they keep themselves comfortable even in unfavourable weather. The Leghorn appears to have adapted itself equally well to the heat

* 'The Leghorn Fowl,' by L. C. Verrey (London, 1887), p. 40.

of Italy, to the extremes of North America, and the variability of the climate in the British Isles. We have only found one country where the Leghorn is not in favour, and that is North Russia, due to the intensity of the cold in winter, and the fact that they require smaller-combed birds, as the combs are very liable to be frost-bitten. So far as meat properties are concerned, the warmest friend of the Leghorn cannot claim that they are good upon the table. They are yellow in flesh and stringy in texture ; hence, except when they are very young, they cannot be recommended for this purpose. A great mistake has been made of late years in breeding Leghorns too large in body, and we are sure that this has had a bad influence upon the laying properties of the breed. It must be borne in mind that the best layers are those slightest in body, and in this respect we think that the Americans and Danes have been better advised than our breeders, in that they have kept the small character, and not gone in for that depth of body and rotundity of shape which have been so evident here of late years. Of course, much of this is due to Minorca influence, but at the same time it is well to bear in mind that in a soft climate such as we have in Britain there is always rather a tendency towards rotundity ; which fact should cause breeders to be careful lest there is any increase in this tendency. If those who keep Leghorns would carefully observe their birds they would see that the birds which are the best egg-producers usually have not the prominence of breast seen upon many of our modern Leghorns. Many instances could be cited as proof in the breed under review, and other varieties as well, and a note of warning is desirable in that the shape of fowls now so much seen, especially in exhibitions, is not the best, and is distinctly different from what was the case when these fowls first came into the country. The Leghorn is a non-sitter, the chickens are very rapid in growth, and the pullets lay early. One of the great points in favour of Leghorns of all races is their activity, which enables them to withstand adverse influences of climate and position. They can keep themselves warm during atmospheric conditions when some other breeds would be huddled up in a corner vainly seeking for shelter. They have a great reserve of vigour, which is essential in the exposed parts of the country, and it is this which has popularized the breed in many districts. They are also excellent layers, and especially where the size of body has not been unduly developed. We must bear in mind that to secure fecundity there should not be too large a frame, and thus the food taken is turned into eggs. It is greatly to be regretted when exhibitors adopt any point which is antagonistic to the economic qualities, and the sooner they recognise the necessity for studying economics the better it will be for them and for any breed which they take up.

Description.—The Leghorn type may be described as follows : The body should be of medium size, wedge-shaped, wide at the shoulders, but rather narrower at the tail, yet full behind, especially below the tail, to allow scope for the egg organs ; the back is round, and the breast fairly full ; the wings are of a good size, and carried close to the body ; the neck is medium in length and well arched, covered with long, profuse hackle ; the head is small, with stout horn-coloured beak ; comb large, though not disproportionate, long and round, carried well down at the back to the hackle and in front over the beak, deeply serrated, the spikes broad at the base ; it is upright in the cock, falling over in the hen ; the wattles are long, and, with the comb, are fine in texture ; face bright red and clean ; earlobe creamy white. The Poultry Club Standard says ' white preferred,' but that is a mistake. We agree with Mr. L. C. Verrey, who says :*

'Though the white lobe is ornamental and showy, yet it is not natural. The original and natural tint was cream : by this I do not mean yellow, but the colour of ivory. It is simply the breeder's art that has produced the pure white. When the legs, beak, and flesh are yellow, it is contrary to nature for the lobes to be pure white.'

Therefore, the practical poultry-keeper should select birds with creamy or even yellow lobes ; the tail is fairly full, and should be carried upright from the body, though not squirrel-tailed, to which this breed has always a tendency. We were interested to see in Italy that nearly all the birds of this class had upright tails ; legs of medium length, showing the thighs very little ; the legs and the feet, upon which are four toes, are always in pure Leghorns yellow in colour, but must not be heavy in bone ; the carriage is upright, showing good action and great activity, but not like the Game fowl, leggy and with sloping breast. Weight : males, 5½ to 7 pounds ; females, 4½ to 5½ pounds.

Of late a great amount of harm has been done by breeding birds too large, and for that the Poultry Club must be held responsible to some extent. In the Standard published in 1886 it was said, ' The larger the better.' No greater mistake can be made than in increasing unduly the size of a breed the main object of which is egg production. In the 1901 Standard this is modified to read, ' Size medium, rather large to be preferred,' but that is also a blunder. Eight-pound cocks and six-pound hens should be thrown out, as they are too large for an egg-laying fowl. Increase of size of body and of comb have done much to injure the Leghorn for practical purposes. In America the former type has been maintained with advantage, and Leghorns in that country are better as layers than the big specimens seen here. Nor are the combs as coarse.

* 'The Leghorn Fowl,' by L. C. Verrey (London, 1887), p. 40.

Varieties.—As already explained, the number of varieties has greatly increased since the breed was first introduced.

White (Fig. 26).—This variety may be named as the leading member of the Leghorn family, although it is probable that some of the others have attained a greater measure of popularity at one time or another. We think, however, that the White holds the first position amongst all the Leghorns. Of course, any white-plumaged fowl is less suitable for keeping in towns where Leghorns are chiefly kept, we are bound to say that they have more of the business type than in exhibition stock, which is all to the good. The real explanation of the introduction of the White Minorca, which has practically merged itself into the Leghorn, was to secure greater purity in the plumage. The tendency to straw colour in the feathers was great, and there can be no question that this tendency must always be apparent with a yellow-fleshed fowl. We regard the dead white so often sought for as un-

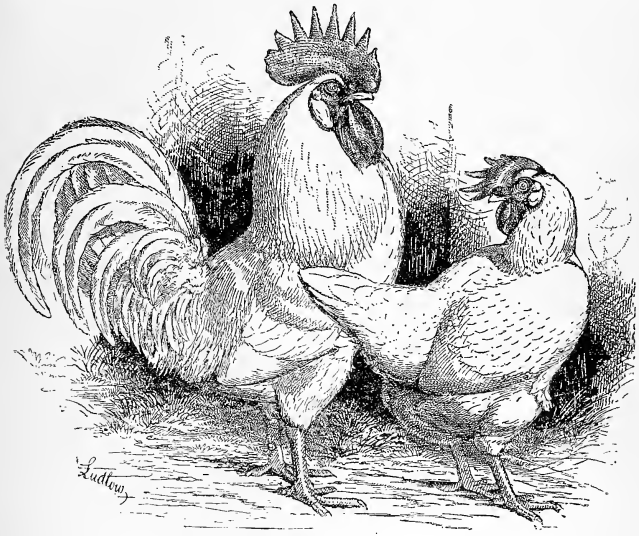


Fig. 26.—White Leghorns.

than if it had coloured feathers, but in rural districts the White Leghorn is very popular indeed, which popularity has been maintained for many years. The original Leghorns, whilst round-bodied fowls, were by no means so round as we see them to-day; in fact, to poultry-breeders who can remember the former fowls those at the present time are more like Minorcas than Leghorns. Fortunately, however, utility breeders have not followed slavishly upon exhibition lines, and having had the opportunity of visiting large numbers of the poultry-breeders in those parts of the country desirable, and think that the plumage should have a very slight creamy tinge. Hence breeders who had idealized the pure white of the Minorca and desired to engraft it upon the Leghorn thought that the best way to do so was by introducing the cross named. Fortunately, in this case it has not been antagonistic to the laying qualities of the breed, otherwise it would have been very serious. It is known that the Minorca is an excellent layer, and hence no serious harm has been done so far as that is concerned.

Brown.—When first introduced the Brown Leghorn

was different from what we see to-day. At that time they were shorter in the leg and rounder in body, whilst in plumage they were not nearly so brilliant as most of the Leghorns have been during the last fifteen or eighteen years. Many of the males were not so black in the breast as now, and there was always a tendency towards reddishness in the wings, whilst the hens had not that fine pencilling which seems to be the aim of many breeders. We can testify to their remarkable vigour, and may mention that they gave the appearance, at any rate, of being larger in body than is the case now, though this is partly due to tightness of feather. About twenty years ago several breeders, with a view to improvement of colour of the plumage, were ill-advised enough to introduce Black-red Game

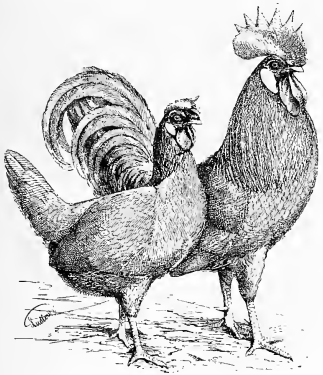


FIG. 27.—BUFF LEGHORNS.

blood; and there is no question that, whilst that influence has gone to a considerable extent, for many years it wrought much evil to the breed. That the plumage was improved from the exhibition point of view cannot be questioned, but the fecundity was lessened, there was a tendency towards greater length of leg, and to older breeders the whole contour of the fowl was absolutely spoiled. Another injury which resulted from this crossing was reduction in the size of the egg. The egg of the Brown Leghorn was never quite so large as that of the White, but the tendency undoubtedly was to differentiate still further between the two. Another mistake has been made in laying too great stress upon the size of comb, upon prominence of earlobes, and upon the striping of the cock's hackle. The Brown Leghorn is a bird of colour, and its similarity in this regard to the Black-red Game was undoubtedly the reason why crossing was resorted to, as that appeared to present the most rapid way of improving the colour of the fowls. Briefly stated, the colour of the male bird should be as follows: Neck-hackle abundant, the ground colour of which is of a golden bay; each feather has a double broad stripe of black running down the centre, though the feathers that are near the head are without the black stripe. Undoubtedly the desire to perfect this feature has led to a good deal of crossing, and, if we were looking at the matter merely from the show point of view, there has been a manifest improvement in this direction of late years. The feathers upon the back are a deep red,

FIG. 28.—BLACK LEGHORN COCK.
Bred by H. R. Melbourne, South Godstone.

nearly crimson, as are the shoulder-coverts and wing-bows. The wing-coverts are of a bluish-violet, forming a distinct band crossing the wing; the primary feathers are brown, and the secondaries a deep bay outside and black inside. When the wing is closed it is the bay colour that is most seen. The saddle-hackle is of an orange-red, and sometimes we see the black stripe as in the neck-hackle; the breast, thighs, and under-parts are black, though in the early days many of the birds had a slight tinge of brown. There can be no question that, in respect to appearance, a perfect black breast is preferable, but this may be carried too far. The tail is of a greenish-black, and rich in colour. In Denmark, in addition to Browns, there are partridge-coloured, which are very rich in hue.

Buff (Fig. 27).—A good-coloured Buff is difficult to obtain, and especially so in the male bird. Most of the specimens show that patchiness which is due to the presence of lighter colour here and there upon the body. On the other hand, there is a tendency in the cocks to a much redder tone. We are of opinion that breeders have made a mistake in attempting to get too much of the gold tinge on the male birds, and that the yellow Buff would be prettier. However, this is a matter which relates to purely fancy poultry rather than for practical purposes. There is no question that most of those who have gone in for this variety of Leghorn have thought more about exhibition points than economic qualities. At the same time, Buff Leghorns, by their activity and good laying qualities, are worthy of the attention of poultry-breeders.

Black (Fig. 28).—This variety has never been bred to the extent which its qualities deserve. Probably this is owing to the difficulty of maintaining bright yellow legs with black plumage. It is a very hardy fowl and an excellent egg-producer, and yet at the same time retains a great deal of the Leghorn character. It is very well suited to the industrial districts, where the lighter-plumaged birds soon lose their beauty by reason of the smoke.

Pile.—This variety is purely a fancy fowl, taking its name from the pile markings, the same as found in the variety of Game with that designation. There can be no question that a really good Pile Leghorn is a very pretty variety, but, as already stated, it has more attractions for the exhibitor than for the practical poultry-keeper, although it is fairly good in its egg-producing qualities.

Duckwing.—We have never yet been able to recognise the Duckwing Leghorn as having what older breeders regard as the Leghorn type; in fact, it is generally acknowledged that the originals of these birds did not carry much real Leghorn blood, and that the peculiar markings were obtained from different races altogether. Breeding this variety has brought out two distinct colours, to one of which the name Silver Duckwing has been given, and the other the Golden Duckwing, the difference being that the latter have a golden-bay ground colour, the former a steely grey.

Cuckoo.—This, as the name indicates, has cuckoo-coloured plumage—that is, blue and white. It is, as a rule, somewhat smaller than the other varieties; and though bred for several years, it is not at all easy to produce good, evenly marked specimens. Many birds of this class are met with in Italy, and there has been less crossing than in several of the other varieties named. These birds are good layers, but show from time to time signs of other influences, especially in the colour of the legs, which are not so clearly yellow as could be desired. Of course, this is often the case with a cuckoo-plumaged bird, as there is always a tendency to mottling in the legs.

Mottled.—These are similar to the Ancona in many respects, which breed is displacing them.

ANCONA.

Nomenclature: *English*, *German*, *Danish*, *Italian*, Ancona; *French*, Ancône; *Hungarian*, Anconai.
Variety: One.
Classification: Non-sitting.
Colour of Flesh and Skin: Yellow.
Colour of Legs and Feet: Yellow, mottled with black.
Colour of Egg-shells: White.

Origin.—It cannot be questioned that the Ancona is a variety of the Italian fowl, or Leghorn, as we term it, although it has succeeded in securing a separate classification out of its native land. At the Rome Show of 1893 no classes were offered for Anconas, which were included in the variety class for Italians. It would appear that fowls of this type were known in England more than twenty years prior to the appearance of the Leghorn, for Mr. Harrison Weir states* that specimens were exhibited in 1851, 1852, 1853, and 1861, in the latter year at Birmingham, and from the description which appeared of that show† it is evident that they were similar to the birds with which we are now familiar. The name has been given owing to the fact that birds of this type appear to be common in the district of Eastern Italy around the port of Ancona, whence they were probably shipped in the first instance, for large numbers of eggs are produced in that part of the Italian peninsula. Mr. A. P. Tomassini, the British Consul at Ancona, states that birds of this type are common in the district, and he suggests that they are due to a cross of what he calls the Valdano, or Leghorn, upon the common fowl of the district. As to what that common fowl was we have no evidence, but it is more than probable that the introduction of the black Italian fowl from Tuscany would produce such results as are here met with, and would satisfactorily indicate the one difference—that of temperament—between the Leghorn and the Ancona. In the earlier editions of Mr. Lewis Wright's 'Book of Poultry'‡ it is suggested that 'the origin is to be found in accidental sports of this colour from crossing Black and White Minorcas.' But that suggestion was based upon incomplete evidence. In the last edition§ acknowledgment is made that it was erroneous, and that the earlier birds were Mottled Leghorns.

That there were at one time birds to which the name Ancona was given which were produced by

* 'Our Poultry,' by Harrison Weir, F.R.H.S. (London, 1903), p. 499.
† *Journal of Horticulture*, 1862, vol. ii., p. 325.
‡ Edition 1875, p. 357.
§ Edition 1902, p. 412.

crossing Black and White Minorcas is undoubted, but their plumage was cuckoo. They were bred in the home of the Minorca—Devonshire—as shown by the following quotation:*

'Mr. W. Beard, of Tiverton, seems to have cultivated them largely, and they are described as resembling Scotch Greys, with black and white mottled legs. Mr. Harewood, of Tiverton, distinctly remembers specimens being shown in 1874; they were common, plumage, was called Ancona. But, as we pointed out in 1895,* 'in the first place, an Ancona has not cuckoo marking, as would be produced by crosses between the Black and White Minorca; and, in the second place, no crossing between the breeds named would give the yellowish legs and skin which are features of this breed. We must, therefore, look elsewhere for the origin, and we think that the explanation will be that the Leghorn is either its source, or

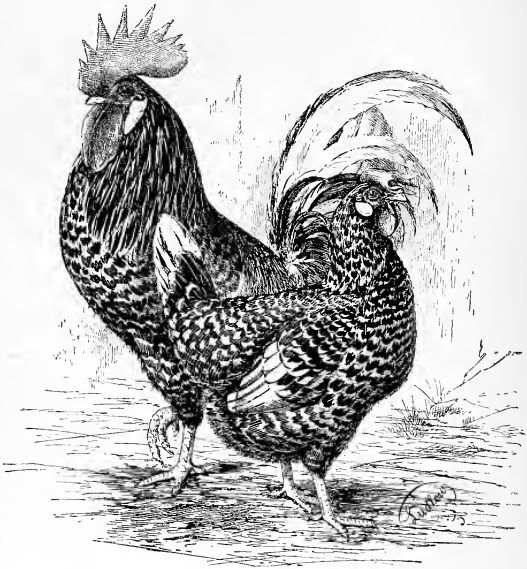


FIG. 29.—ANCONAS.

he says, but little trouble was taken to breed them to one type, and consequently they did not attract any great amount of attention.'

From the sparse mention made by Mr. W. B. Tegetmeier,† it is evident that almost any bird of the Mediterranean type, if mixed black and white in that both Leghorns and Anconas have come from the same stock.' Later observations personally made in Italy have confirmed that opinion, which is generally accepted.

History.—We have already seen that what would appear to have been pure Anconas were imported about the middle of last century, but by whom we

* *Feathered World*, September 25. 1896.

† 'Poultry Book,' by W. B. Tegetmeier (London, 1873), p. 166.

* *Live Stock Journal Almanack* (London, 1895), p. 201.

have no record. About 1880, so far as can be traced, other birds were brought over by a Captain Rowse, but they were gradually becoming extinct, when Mr. A. W. Geffcken, then living at Southampton, obtained in 1886 other birds direct from Italy. The birds bred true to type; they differed from the Leghorns in that many had mottled yellow legs; they proved hardy and prolific layers even in the most exposed positions; and they were taken up by a few breeders, amongst whom was Mrs. Bourlay, of Frankley, near Birmingham, who, living in a cold, high, and exposed position immediately north of the Lickey, found them a valuable breed for egg production. Visiting that lady in June, 1894, we were so struck with their value as a utility fowl that we called special attention to them in the *Live Stock Journal Almanack* of 1895, and elsewhere. The result was a great accession to the number of breeders; further importations took place, and in 1898 a club was formed. Unfortunately, however, this passed into the control of fanciers who cared little for the economic qualities, and who were ready to sacrifice the latter in order to secure perfect external characters. Or, as one of those chiefly responsible for the change made, said,* 'The profits accruing by breeding a bird that can win a pocketful of money in the season are far greater than a basketful of eggs at a penny a piece.'

Such may be true of one individual, but is fatal to the general position of any race, and by the latter will its value be determined. It is the fancier run mad who advocates such a course. The changes adopted by the Ancona Club have been from the exhibition point of view, and were it not that there are many breeders who adhere to the older type, and have refused to improve external characters at the expense of economic qualities, but have kept the latter always to the fore, the breed would be of smaller use as an egg-producer. Such divergences have retarded the popularity of the breed, and purchasers of mere exhibition stock have found they lacked the vigour and prolificacy expected. Moreover, crossing with the Minorca has been resorted to in order to enhance size of body and of comb; also to fix the white earlobe, which ought not to be found on the Ancona.

Economic Qualities.—Like the Leghorn, the Ancona is preeminently an egg-producer, and it is one of the best layers we have. In size the eggs approximate to the Leghorn, those from adult hens weighing well over 2 ounces each; these are white in shell. The chickens are very precocious, and are speedily able to look after themselves. They are vigorous, active, rapid in growth, and good eaters, though by no means heavy food consumers. Maturing quickly, the pullets commence laying early, if hatched at the right season of the year, and are found to be good winter layers if properly cared for, due to their activity and foraging propensities, which keep them hardy. Their table properties are only mediocre, except as milk chickens, but we cannot expect all the talents in any variety. They are non-sitters. The Ancona is most active in habit, does not thrive so well in confinement as at liberty, and is very nervous in temperament, especially when disturbed by strangers. For that reason they are often spoken of as wild.

Description (Fig. 29).—In type of body the Ancona resembles the Leghorn, with one exception—namely, that they are not so deep or so prominent in breast, thus having a somewhat slighter appearance. That may be due to the fact that Leghorns have been bred in England for a longer period, as the tendency is to increase of thickness of body in this climate. The legs of the imported birds were yellow mottled with black, which is to be looked for in birds having so much black in the plumage; but there has been a tendency to eliminate the black upon the legs, which is to be regretted, as those specimens so marked are generally the more vigorous. The beak is long and fine, and yellow with horn-coloured shadings; in the original stock the earlobes were red or creamy, but in exhibition specimens white is insisted upon. We have seen, in connection with Leghorns, that to insist upon white earlobes with yellow-fleshed birds is against nature, tending to the keeping of fowls under unnatural conditions with a view to purity of lobe. The same is true with Anconas, in which this feature should be cream coloured, never white. In fact, red-lobed birds are generally hardier than those with white or cream lobes. Further, the lobes should be small; in colour the entire plumage of both sexes, excepting the cock's tail, should be brown-black, each feather tipped with creamy white, and it is that which gives the mottling. The cock's sickles are white with black tips. The tips should be small and V-shaped, not spangled or laced or barred. The later standard adopted provides for beetle-green plumage, but that is undesirable at this stage of development. Weight: males, 6 pounds; females, 5 pounds. For a laying breed increase of these weights is objectionable, and should be resisted.

VOLDARNO.

NOMENCLATURE: *Italian*, Voldarno.
VARIETIES: Black, White.
CLASSIFICATION: Non-sitting.
COLOUR OF FLESH AND SKIN: In Blacks, grey; in Whites, yellow.
COLOUR OF LEGS AND FEET: In Blacks, dark grey; in Whites, yellow.
COLOUR OF EGG-SHELLS: White.

Origin.—At the great Exhibition held in Rome in 1903 classes were given for a breed which we had never seen before, called the Voldarno, but respecting which we were able to obtain very little information. The

* Mr. E. Cobb, *Feathered World*, October 7, 1898.

Marquis Trevisani, President of the Italian Poultry Society, thus speaks of it:* 'The brothers Grilli, of Florence, and other Tuscan poultry-breeders have launched this breed, which, in my opinion, is merely the common fowl of Tuscany selected and made uniform in coloration.' From their appearance we should not be surprised to find that the original Italian fowls, or what is now known as the Leghorn, own the same ancestry as the Voldarno.

History.—We have not been able to obtain any direct evidence as to their history, more than that they are kept to a very limited extent.

Economic Qualities.—The birds are small in size, adult cocks weighing about 5 pounds. They are stated to be very hardy, and the hens remarkable layers. It is also claimed that they fatten well, but table poultry in Italy is generally poor.

Description.—In general appearance they resemble the Leghorn, but are fuller in front, more like the English Leghorns than the Italian. The combs are single, but smaller in size. The Blacks have dark legs, and the Whites yellow. Probably our Black Leghorns are directly descended from these Tuscan fowls.

Varieties.—Two colours were shown at the Rome show, namely, Whites and Blacks, but the majority were of the latter colour. As already stated, the Whites have yellow legs and the Blacks dark grey. In other respects they are alike.

POLVERARA.

NOMENCLATURE: *Italian*, Polverara, or Padovarna Polverara.
VARIETIES: Black, White, Cuckoo, Gold, Silver.
CLASSIFICATION: General Purpose.
COLOUR OF FLESH AND SKIN: White.
COLOUR OF LEGS AND FEET: Dark green.
COLOUR OF EGG-SHELLS: White.

Origin.—It is evident that this race is allied to what we call the Polish, which is very widely distributed upon the Continent of Europe, but whether a direct descendant or not does not appear to be known. In shape, crest, and softness of feather, it has many points of resemblance to the Crèvecœur, and we learnt in Italy that it is supposed to be related thereto.

History.—'The Polverara is indigenous to the province of Padua, which for the production of eggs and poultry is one of the most important of Italian provinces.'† Until recently pure specimens of the race were very scarce, as they could only be procured from four or five breeders at Polverara, a village near Padua; but they are now in more hands, and the strain has been improved by careful selection.

Economic Qualities.—The Polverara is very hardy, tame, and precocious, but the chicks feel cold considerably. The hens are prolific layers, sitting only about twice in the year. The feathers are soft, and on that account highly esteemed.

Description.—The body is long, deep, and round; the back short, standing upon legs of medium length; the neck thick, well covered with abundant long hackle; head neat, surmounted by a full crest, well divided and almost straight; the comb, which consists of two little horns, stands out prominently in front of the crest; wattles small, and, like the comb, bright red; earlobes white; tail small and forked; toes four. Weight: males, 6 pounds; females, $4\frac{1}{2}$ pounds.

Varieties.—*Blacks* are most common, and are generally preferred. They are of a brilliant colour, with blue-bronze reflections. *Whites* are rare, as are *Cuckoos*. The *Golds* and *Silvers* are met with in some places, probably due to crosses, but have not received much attention.

PADOVANA.

NOMENCLATURE: *Italian*, Padovana, or Giant Padovana.
VARIETY: One.
CLASSIFICATION: Table.
COLOUR OF FLESH AND SKIN: White.
COLOUR OF LEGS AND FEET: Rosy-yellow.
COLOUR OF EGG-SHELLS: Tinted.

Origin.—According to the Marquis Trevisani, this breed was created in Italy by a cross in 1850 between a Cochin cock and a hen of the common Polverara race. At first, as might be expected, the results were not seen in uniformity of plumage, and it required many years of selection ere it attained anything like purity of race, eliminating excessive features of both parents. 'It was only in the year 1875 that the breed could be considered as properly established, and from thenceforward perfected.'*

History.—From what we have been able to learn, the progress made by this breed is considerable, more especially where table poultry is in demand, as it is the only fowl native to Italy which has good flesh qualities and size of body. It cannot be regarded as a first-class table fowl, but is a distinct improvement upon the type generally met with.

Economic Qualities.—As seen above, these fowls are large, carrying an abundance of flesh, which

* 'Pollicoltura,' del Marchese G. Trevisani (Milan, 1900), p. 83.
† *Ibid.*, p. 32.

* 'Pollicoltura,' del Marchese G. Trevisani (Milan, 1900), pp. 3, 5.

is said to be good in quality. The writer already quoted states that 'the ease with which they are fatted renders the breed still more valuable, for the fat, which forms in great abundance, is very delicate, and in many dishes it is used as a substitute for the best Lombardy butter.'* The hens are said to be splendid layers of large-sized eggs, commencing in November, and sitting but seldom. They are very hardy, quiet, and not given to stray, whilst the chickens grow moderately. Our opinion of the breed as seen in Italy is that they are very useful birds, of the General Purpose type, but we should not expect by the weight of bone that they mature quickly. For autumn fowls they should prove excellent.

Description.—The body is large and well proportioned, showing robustness; breast large, well developed, and fleshy; back broad; neck long, massive, and well arched; head light; beak dark, strong, and curved; comb triple, with a knob rising at the back, medium in size; wattles long and pendulous and fine in texture; earlobes creamy white; wings very strong and large; tail short; legs long, but not heavy in bone, with short feathers on the outside, and the skin rosy-yellow; the plumage is of a metallic black, except on the hackles and wings, which are often golden-yellow, though entirely black plumage is preferred. Weight: males, 9 to 11 pounds; females, 7 to 9 pounds.

* 'Pollicoltura,' del Marchese G. Trevisant (Milan, 1900), p. 40.

MAGGI.

This race, of which we saw several specimens at Rome in 1903, is not yet fixed, and we cannot do more than refer to it, without attempting to indicate its characters. Those seen by us were like Black-red Game, but splashed upon the breast. They had a strange-looking comb, not unlike that of the Houdan, except that the two parts are closer together. One Italian writer thus speaks of them:*

'This breed is the outcome of some fortunate crosses made by Cardinal U. Maggi between the large Voldarno hens and Brahma, Cochin, and Dorking. After a long period of patient and careful selection the breed has become extremely valuable from every point of view, especially as good sitters. The hens, when well nourished and properly kept, give from 130 to 160 eggs in the year. The flesh is good up to the age of ten months, but after this it becomes like that of the large foreign breeds from which these fowls are descended.'

They are large in size, and said to be very hardy.

* 'Polli er Uova,' del Professor Pietro Cassella (Naples, 1896), p. 293.

CHAPTER VI

FRENCH RACES OF FOWLS

Bresse	Caux	Caussade
La Flèche	Courtes Pattes	French Cuckoo
Du Mans	Houdan	Bourbourg
Crèvecœur	Faverolles	Estaires
Caumont	Mantes	Hergnies

IN no country with which we are familiar is there so great a number of breeds and varieties of fowls as in France. This is explainable by the fact that until the last twenty or thirty years a greater amount of attention was paid by the French farmers and peasants to poultry than elsewhere. For centuries the flesh of poultry has been regarded with favour to an extent not then found in colder regions, and eggs have entered into the food consumed in many ways. Probably nowhere else—except, perhaps, Belgium—was the same attention given to the breeding and management of the domestic fowl by the farmers of the country, who found in it a steady source of income equally in the sale of eggs and chickens. Selection of birds as breeders upon definite lines appears to have prevailed all over the land. Such variations as would be produced without the help of man, but which would soon disappear without his aid, have been fixed, and there is scarcely any part of France where, in one direction or another, breeds suitable to the district are not found. Nor must it be thought that in a breed the external characters were everything, for it is to the credit of the French that economic qualities ever stood first, as should always be the case. Hence the majority of French fowls, even though the type is well defined, appear somewhat mediocre to the eye of a fancier. The main object was to conserve and improve the fecundity and the table properties, and fixity of external characters was adopted because it was found that by doing so the perpetuation of such properties was secured. Hence we find that there is considerable divergence between the different districts of France in the class of fowls kept, but that in each district the birds are remarkably uniform. In the United Kingdom we have only a few similar instances—notably in Surrey and Sussex, in Devon and Cornwall, and in Lincolnshire with fowls, and in Buckinghamshire with ducks, although with other branches of livestock there is no country where loyalty to the local type is more manifest—notably in horses, cattle, and sheep. The advent of breeding for exhibition in France—that is, the growth of poultry-keeping as a recreation—is modifying methods to a limited extent, as it is to fanciers rather than to practical poultrymen that we owe the lack of uniformity in accordance with local traditions. Also, our intensive methods lead to more rapid exhaustion of breeds.

BRESSE.

NOMENCLATURE: In all countries, Bresse or La Bresse.
VARIETIES: Black, White, Grey, Blue.
CLASSIFICATION: Table.
COLOUR OF FLESH AND SKIN: White.
COLOUR OF LEGS AND FEET: Blue-grey.
COLOUR OF EGG-SHELLS: White.

Origin.—The breeds of poultry which are met with in the countries on the northern shores of the Mediterranean Sea have much in common so far as shape is concerned, and this is true of the La Bresse as of the Italian and Spanish varieties, so much so that probably all have a common origin, although we have no definite records as to when or how the migration took place. Mr. Verrey suggests* that 'the Dorking played a rather prominent part in the manufacture of the La Bresse,' but we have been unable to trace anything in support of such a view. Even among French writers there is considerable difference of opinion. In the last

* 'French Breeds of Poultry,' by L. C. Verrey (London, 1891), p. 44.

edition of M. La Perre de Roo's work he says :* 'It is, in all probability, the result of a cross between the common fowl and the Andalusian,' which also lacks confirmation, even though the same view is held by M. Cornevin.† If we accept the evidence of structure, size and shape of body, together with vigour of constitution and general activity, the Italian influence is apparent; and we therefore agree with M. Rémy Saint-Loup, who says :‡ 'In form these birds are related to the Leghorn.'

Considering how easily fowls could pass from Italy to Southern France, it may be accepted that the Bresse was due to the crossing of what we call Leghorns upon the common fowl of the country. Why this type should be restricted to the Bresse country, immediately to the south of Burgundy, of which Bourg is the chief town, cannot be explained, nor yet why they apparently stopped at that point, as the type is not found further north.

properties, that it has become known, and it is not bred at all except with a view to meeting market demands. Yet we have found by personal observations in the Bresse country, having traversed the district from one end to the other, attended the local markets, and visited several of the leading producers, that extreme care is taken in maintaining the race pure. Several crosses have been tried, but the result was not satisfactory.

Economic Qualities. — Whilst this breed is medium in size—small for a table fowl when in lean condition—it fattens remarkably and increases greatly in flesh, and its fineness of bone is to the advantage of producer and consumer. Gourmets generally admit that it occupies the first rank amongst table poultry. The birds are hardy, good layers of fair-sized white-shelled eggs, and excellent foragers. In the 1894-1895 laying competition of the Utility Poultry Club a lot of

FIG. 30.—WHITE BRESSE COCK.
Bred by T. E. Wood, Pebmarsh.

FIG. 31.—WHITE BRESSE HEN.
Bred by T. E. Wood, Pebmarsh.

History.—So far as our inquiries have gone, fowls of this type have been bred in the Bresse country for something like a hundred years, and the district has been famous for its table poultry during the greater part of that time. Upon the Paris and other great French markets these birds hold the premier position, both for quality of flesh and price, and vast quantities of the dead birds are distributed over Southern France, in Switzerland, and Northern Italy. High prices are obtained for the best specimens in the district itself. It is purely as a utility fowl, by reason of its meat

White Bresse held second place. The flesh is most delicate, very abundant, and well distributed over the body, and, when roasted properly, eats with a shortness we have not met with in any other breed. In a well-fatted bird the thickness of meat on the breast is remarkable, whilst in colour of flesh and delicacy of skin it has no superior. The hens are not early sitters; in fact, we have had birds that never sat at all, but they make excellent mothers. For several years we kept a flock of Bresse, finding them very good winter layers and hardy, the chickens growing very rapidly, which quality proves that they are nearly allied to the Leghorn and not to the Spanish races.

Description.—The body of the Bresse fowl is of medium size, well built, long, the chest carried prominently forward, moderately deep and broad, but

* 'Monographie des Races de Poules,' par V. La Perre de Roo (Paris, undated), p. 45.
† 'Les Oiseaux de Basse-Cour,' par Ch. Cornevin (Paris, 1895), p. 140.
‡ 'Les Oiseaux de Basse-Cour,' par Rémy Saint-Loup (Paris, 1895), p. 119.

giving the appearance of lightness rather than a massive form; the neck is short, full, and well covered with hackle; the head long and fine; beak short and strong; the comb is single, carried upright in the cock and falling over in the hen, high and long, reaching well over the beak in front and over the neck behind—in fact, resembling closely that of the Leghorn, but very fine in texture, as are the wattles, which are also long; the face is clean and red, the eye red, and the earlobe white and rather large; the legs are of medium length, and dark blue in colour, with four toes on the feet; the bone is fine and very light; tail in cock large and ornamented with long sickles; the carriage is graceful and very active—in fact, the birds are rather excitable. Weight: males, 5 to 6½ pounds; females, 4½ to 5½ pounds. The appearance of the Bresse fowl is very like the Leghorn so far as shape is concerned.

Varieties.—The leading subraces are Grey and Black, but, in addition, pure White and Blue are also met with.

Grey (*Variété de Bourg*).—This is generally regarded as the original type of Bresse fowl, but upon what authority we have not been able to discover. In the male the head, neck, and breast are white; the back is white, ticked with grey, more especially close to the neck, and these markings are often hidden by the neck-hackle; the wings are white, with two very dark grey or black bars on the primary and secondary feathers; the tail proper is black, but the sickles have a broad white edge on both sides; comb, face, and wattles bright red; earlobes creamy white; legs and feet blue-grey.

White (Figs. 30 and 31).—By selection a white variety has been obtained, having earlobes and legs as in the Grey. This variety we have found a true breeder and very prolific in this country.

Black (*Variété de Louhans*).—Chiefly bred in the district around the town of Louhans, where we have seen large numbers of these fowls; colour a deep metallic black; earlobes snow white; legs and feet deep blue.

Blue.—Of more recent production, but as to its breeding we have no evidence. It may be the result of crossing between the Grey and Black varieties, or perhaps Andalusian blood has been used, thus explaining statements by French writers as to Spanish influence in the Bresse fowl.

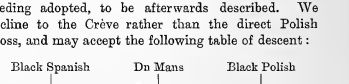
LA FLÈCHE.

Nomenclature: In all countries, La Flèche.
Varieties: One.
Classification: Table.
Colour of Flesh and Skin: White.
Colour of Legs and Feet: Dark slate or black.
Colour of Egg-shells: White.

Origin.—This race is found almost exclusively in the Valley of La Sarthe, north of the river Loire, in the Department of that name, of which La Flèche is one of the leading towns. The fowl has been bred there for a long period of time. M. Jacque states that* it has been known since the fifteenth century, but that it is believed to be much older. M. La Perre de Roo says:†

'Its origin is very obscure; but by its high carriage, its action, the white and large earlobes, the original shape of the comb, and the trace of crest which crowns the head, it may be supposed that it has issued from a cross between the Spanish fowl and the Polish or Crèvecœur.'

Other writers support that opinion, which has every probability in its favour, even though the whiteness and quality of the flesh are far in advance of any of the breeds named. But these may be due to the rich pastures of La Sarthe, upon which the fowls have been kept for many generations, and to the system of feeding adopted, to be afterwards described. We incline to the Crève rather than the direct Polish cross, and may accept the following table of descent:



The peculiar comb, noted below, follows that of the Crève, which, however, may have descended from the Polish. Darwin classes both Crèves and Houdans as sub-breeds of the Polish.

History.—We have practically told all that is known of the La Flèche fowl. At one period it would appear to have had a wider distribution than is now the case in its own country. From personal observations in France, we learn that out of La Sarthe they are scarcely seen at all, except where kept by amateurs. But in La Sarthe they are regarded as the finest of all table poultry, which view is supported by the position they take in the great exhibitions, more especially in the dead classes. It is some forty years ago since they were introduced into Britain, but whilst there have always been a few breeders and exhibitors of La Flèche, they have never won a position for practical purposes. What is the case here is true in America and other countries. The reason is explainable by the fact that, although they are good layers and make fine table poultry, they are slow growers, and do not mature quickly enough for our markets.

In France the La Flèche is not eaten until it is from eight to ten months old, when they fatten splendidly, and the flesh is very tender and fine in flavour. In this country the demand for dead fowls weighing

* 'Le Poulailler,' par Ch. Jacque, seventh edition (Paris 1892), p. 152.
† 'Monographie des Races de Poules,' par V. La Perre de Roo (Paris), p. 65.

9 to 11 pounds is comparatively small, and the prices obtainable much below those secured in Paris. Hence breeders would not find them profitable, and that is the final test. It is noteworthy that at one time in France the La Flèche fowls had a small crest behind the comb, but that has been bred out in England, and is less seen across the English Channel than formerly.

Economic Qualities.—In this country the La Flèche has proved delicate, more specially upon heavier soils, and the chickens are very subject to leg weakness. We believe that it will be found that these results are due to breeding and keeping the birds in confinement, and if they were maintained under more natural conditions they would be much hardier. To obtain the best results they should be given rich soils. But even in France it is recognised that they require special treatment.

M. Lemoine says :*

'The chickens are easily reared during the first few days, but there is a critical time for them to pass at the time of their first moult; the down falls rapidly, and the feathers do not grow quickly; this results in their little bodies not being defended, and they are very susceptible to cold and rain.'

He adds that they must be sheltered during the first six weeks, and that they are most suited to high ground, where there is plenty of sunshine. Speaking of the qualities of the La Flèche, the same author says† that 'it is remarkable for the fineness of its flesh; both poulardes and capons are very renowned: they are distinguished above all for their quality of fattening, and for the increase of flesh. . . . The hen is a good layer, producing 140 eggs per annum; the weight of each egg is upwards of 2¼ ounces, but they sit rarely.' This is confirmed by the experience of our own breeders. In La Sarthe great attention is paid to the feeding of the growing birds. M. La Perre de Roo, in his work already mentioned,‡ says :

'During the first eight to fifteen days which follow their hatching they are fed on breadcrumbs steeped in milk, or upon bread finely crumbled, and soup; after fifteen days upon this diet, they feed upon whole buckwheat or a paste made of buckwheat flour, or ground maize or oats mixed with milk, until they reach the age of seven or eight months, because it is at that age and onwards they are submitted to the fattening process.'

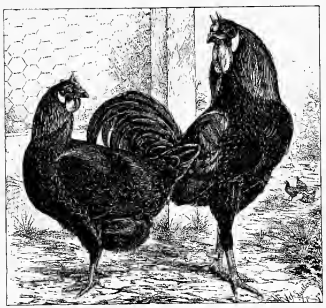


Fig. 32.—La Flèche.

Description (Fig. 32).—French La Flèche are bred carefully, and on similar lines to English, except that in some cases the rudimentary crest is met with. The body is large, long, and deep, with broad breast, and back sloping well to the tail; the neck is long and graceful; the head fine and long, with a corresponding beak, which is dark horn in colour, full red eye, and surmounted with a large horned comb, having two even but somewhat satanic spikes in front, and a small blunt protuberance immediately behind. It is regarded as important that the comb should be fine in texture, as that indicates the flesh qualities; the wattles are large; face bare, and with the comb and wattles bright red; earlobes large and white; the legs are long, not heavy in bone, and dark slate or black; toes four; the tail is long and full, and the sickles in the cock carried well back; the colour of the entire plumage is a beautiful black, with metallic green and violet reflections. Weight: males, 8 to 10 pounds; females, 6 to 8 pounds. In France these weights are often exceeded. The whole appearance, excepting the comb, is stylish and attractive.

DU MANS.

Nomenclature: In all countries, Du Mans or Mans.
Variety: One.
Classification: Table.
Colour of Flesh and Skin: White.
Colour of Legs and Feet: Dark slate or black.
Colour of Egg-shells: White.

Origin.—The Du Mans fowl is met with chiefly around the town of Le Mans, capital of the old French Department of Maine. The records of it are very few, and it is difficult to discover the origin. That it is closely allied to the La Flèche is evident; in fact, as to shape, colour of plumage, and qualities, they are very similar, the chief difference being found in the comb. One French author* suggests that the La Flèche were first bred around Le Mans, which is by

* 'La Basse-Cour Pratique,' par E. Lemoine (Paris, 1902), pp. 72-73.
† *Ibid.*, pp. 71-72.
‡ Page 66.
* 'La Poulailler,' par Ch. Jacque, seventh edition (Paris, 1892), p. 152.

no means improbable; and it is reasonable to suppose that the two breeds were at one time the same, and that different out-crosses and breeding to different ideals have made them sufficiently distinct to receive separate recognition. As to how the rose comb was obtained we have no direct indication, but it is believed that feature is a result of Hamburgh influence. It may be so, but among fowls bred without strict adherence to type variations would frequently appear. Our opinion is that the Du Mans is the older fowl of the district, that it was fixed by the introduction of a modicum of Spanish blood, and that the La Flèche is the variation owing to a cross with the Crèvecœur.

History. — These birds are bred essentially for practical purposes, and are seldom met with outside the Le Mans district. So far as we are aware they have not been introduced into any other country.

Economic Qualities.—At Le Mans there is an important industry in fattening poultry, and the Du Mans fowls are famous for their fine flesh qualities. Some years ago we were informed by the English Consul in that city that large numbers of dead birds were exported to Russia, and that he could not buy them upon the spot at less than 20s. each. The birds are large, fattening well, and laying on a large quantity of beautifully white, fine-flavoured flesh. They are very hardy, easily acclimatized and reared, and have fine bone. The hens are only moderate layers, and the eggs, whilst well over 2 ounces each, are a shade smaller than those of the La Flèche. They are non-sitters.

Description.—The particulars given as to the La Flèche will suffice for the Du Mans, with two or three exceptions. First, the comb is rose, very similar to that of the Hamburgh, having the long spike behind, but it is somewhat coarser and larger. There is, however, no indication of crest on the head, which is to be expected from the absence of Crèvecœur blood. Second, the plumage, whilst black, is duller than that of the La Flèche, without the metallic sheen already referred to. And, third, the body is heavier when the birds are in a lean condition.

CRÈVECŒUR.

NOMENCLATURE: In all countries, Crèvecœur.
VARIETY: Black, White, Blue.
CLASSIFICATION: Table.
COLOUR OF FLESH AND SKIN: White.
COLOUR OF LEGS AND FEET: In Black and Blue, very dark slate or black; in White, pinky-white.
COLOUR OF EGG-SHELLS: White.

Origin.—It is generally admitted that the Crèvecœur owes some of its special characteristics to the Polish, but, as is usual with races existing prior to the middle of last century, there are no definite records upon which we can rely. This is supported by a statement made in 1852 in an interesting article on 'Normandy Poultry,'* in which it is stated that around Caen and in the Department of Calvados Polish fowls were in the majority. It is curious to find, in view of the fact that the Crèvecœur has been primarily a Normandy and Picardy breed, that some of the earlier writers, notably Wingfield and Johnson,† stated its habitat to be Burgundy; but they all regarded it as of Polish descent, and the birds of that period certainly were nearer in type to the Polish than is now the case. The same error was made in the 1854 edition of Moubray. As we have already seen in connection with the La Flèche, Darwin classes both Crèves and Houdans as subvarieties of the Polish. M. La Perre de Roo says:‡ 'There is very little known as to its origin. It is suggested that it originated in Normandy or Picardy, and that it is named after the village of Crèvecœur, situated between Lisieux and Caen, where we find, however, more Caumont fowls and other varieties approaching more or less to the Crèvecœur than of pure-bred specimens.'

The fact that other classes of fowls predominate at Crèvecœur no more indicates that the breed did not originate in the district than that Dorking is no longer the great centre for our premier race of poultry. Mr. Lewis Wright § mentions that at the Birmingham Show of 1855 Black-crested Black Polish were exhibited, and, from other evidence, we conclude that the Crèvecœur is directly descended from the Black Polish, which, bred for generations on the rich lands of Normandy with a view to the improvement of table qualities, is modified greatly, and has resulted in the breed as we now know it.

History.—We have not been able to obtain any definite information as to when the Crève began to assume an individuality, nor yet when it was first recognised under a distinct name. We have, however, learnt that the name is derived from the village of Crèvecœur, and that in the middle of last century black fowls of this type were common in the Department of Calvados, where the breeders of larger stock are well known for their skill. Birds of the type named were known in England about 1852, if not before, but some of these were black and white, not unlike an irregularly marked Silver Polish.‖ Even then they were recognised as Crèvecœurs, and not Polish. Many of these earlier birds had white feathers in the crest, and some displayed yellow feathers in the hackles. The size of body was much less than is now found both in France and England. At that time both

* *Cottage Gardener*, vol. ix., November 11, 1852, p. 111.
† 'The Poultry Book,' by Wingfield and Johnson (London, 1853), p. 226.
‡ 'Monographie des Races de Poules,' par V. La Perre de Roo (Paris), p. 70.
§ 'New Book of Poultry,' by Lewis Wright (London, 1902), p. 142.
‖ 'The Poultry Book,' by Wingfield and Johnson, p. 226.

Whites and Blues were known. Mr. Tegetmeier mentions* that 'some idea of the value attached to this breed by our French neighbours may be gained from a statement of the fact that at the first great Agricultural Exhibition in Paris, in 1855, there were two equal sets of prizes offered for the poultry exhibited—the first for Crèvecœurs, the second for all other varieties taken together.' In Britain the breed secured a moderate amount of favour, more especially among exhibitors, reaching the maximum about twenty years ago. Since that time it has lost ground, but in France it is still bred to a considerable extent.

Economic Qualities.—The Crèvecœur is essentially a table fowl, though not equal to the Bresse or the La Flèche. At the great Paris Exhibitions it is generally well represented and the specimens excellent. But, like our Dorking, it has not so fine a skin, and it is seldom that these breeds appear smooth, having an unfilled appearance. The hen is a fairly good layer, and the eggs are very large and white in shell. They become broody very seldom, and can generally be classed as non-sitters. M. Lemoine thus speaks of the breed:† 'It is easily fatted, and in all the district around Lisieux, Saint-Pierre-sur-Dives, and Mezidon, the farmers, market-gardeners, and others, breed and fatten this fine Crèvecœur fowl; also the markets of these localities are largely supplied by them, and the sale of these birds attains a considerable figure. It is there the agents go to buy some of the best fowls for the Paris poultry dealers.' Although the breed has never secured popularity in Britain, those who keep them claim that they are quick in growth, fatten well, and make splendid birds on the table, both as to size and quality. The chief reason why they have not been received with greater favour is that they are usually regarded as delicate; and almost all writers, both French and English, accept this view. M. Lemoine recognises this fact thus:‡ 'Either by reason of the crest or the conformation of the nostrils, Crèvecœurs are very sensitive to cold mists. Roup is the malady which frequently attacks them; to avoid the consequences it is necessary every night to place them in the centre of the poultry-yard.' If this be true in France, it is much more likely to be so in a moist climate like that of the United Kingdom, and more especially with a crested variety. For breeding and practical purposes generally there is no reason why the crest should not be cut off.

On the other hand, it is claimed by Mr. S. W. Thomas* that, if given a good range, they are hardy. He says: 'I have had pullets laying in snow and frost at five and a half months old, and have killed cockerels weighing nearly 4 pounds, ready for the table, at four and a half months. . . . Their value as a cross cannot well be overstated. They give size, productiveness, and quality of flesh to any breed that they may be required to be crossed with.' Mr. Thomas lives in South Wales, on a cold soil, in an exposed position; but we should prefer more favourable conditions for keeping the Crèvecœur.

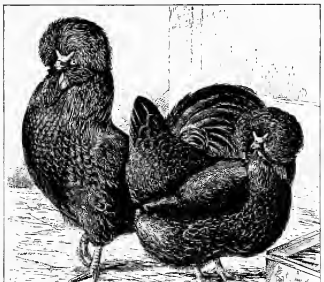


FIG. 33.—CRÈVECŒURS.

Description. — The body of the Crèvecœur is large and square, with a broad breast, carried well forward, a long, straight keel, a broad back, and large wings; the neck is long, and well covered with hackle; the head is long and strong, as is the beak, which is very dark horn; the comb is horned, medium in size, the two points well apart, carried in front of crest, and fine in texture; the eye is full; the wattles medium; on the head is a large crest, not too globular, and rather flat in front; below the face on either side are full muffs of soft feathers; earlobe small and white, but covered by the muffs; the tail is large, and the sickles rather high; the legs are shortish, but firm and strong and clean, and the feet have four toes. Weight: males, 7 to 9 pounds; females, 5½ to 7 pounds. The entire appearance is bold and the gait graceful.

Varieties.—As already mentioned, there are three varieties of the race—namely, Black, White, and Blue.

BLACK (Fig. 33).—This is the most common. The plumage, including the crest, is bright black, with a good sheen and violet reflections; the beak is dark horn, and the legs and feet black or slaty blue.

* 'The Poultry Book,' by W. B. Tegetmeier, F.Z.S., (London, 1873), pp. 121-122.

† 'La Basse-Cour Pratique,' par E. Lemoine (Paris, 1902), pp. 64-65.

‡ *Ibid.*, p. 66.

* *Fancier's Gazette*, Summer Number, 1891, p. 16.

WHITE.—Less known, but we have seen some very pretty specimens in France, where they are regarded with favour for ornamental purposes. Over the greater part of the body, the neck, and the tail, the plumage is velvety white, the under-parts dead white; beak almost white; legs and feet pinky-white. Doubtless a sport from the Black.

BLUE.—Seldom met with, and we only remember having seen a few specimens. In plumage, the crest, muffs, neck-hackle, back wings, and tail are dark blue-grey, the rest of the body slate-blue; beak and legs as in Blacks. Obtained by crossing Blacks and Whites.

CAUMONT.

This breed is regarded as a variety of the Crèvecœur, and is sometimes called Pavilly, taking its name from Caumont, in Normandy, on the left bank of the river Seine, below Rouen. We have personally met with few specimens, but quote the following from M. La Perre de Roo:*

'The Caumont fowl is a variety of the Crèvecœur differing only in the crest, which is smaller, and by the absence of a cravat (muff). . . . The Caumont is vigorous, does not need any particular care, is never ill, is active, alert, and has no rival as a layer. The frame is as large and the flesh as delicate as the Crèvecœur, from which it is descended, and it inherits all the qualities of that breed. The chickens are easily reared, are extremely vigorous, very precocious, fatten well, and are ready for the table at the age of three months.'

The legs are fine in bone, and dark blue-grey in colour. The hens seldom become broody.

CAUX.

It is also claimed that this breed is a variation from the Crèvecœur, from which it differs distinctly in that it has no crest. M. La Perre de Roo† says that 'its plumage is of a brilliant black from one end to the other. It has a small head, single comb, upright, finely serrated, large in proportion to its size; the ear-lobes are white, bordered with a blue line; the feet blue, clean, with four toes on each foot. The hen is an excellent layer and very hardy, but she sits seldom and badly. The raising of the chickens does not require any particular care. They are fed in Normandy on bread steeped in cider during the first fortnight, after which age they are given the same food as adults.' The Pays de Caux is on the right bank of the Seine, near the town of Duclair, and M. Lemoine says that they are bred largely on both banks of the river.

* 'Monographie des Races de Poules,' par V. La Perre de Roo (Paris), p. 77.
† *Ibid.*, p. 76.

COURTES PATTES.

NOMENCLATURE: In most countries, Courtes Pattes; *German*, Krüper; *Spanish*, Paticorta.
VARIETY: One.
CLASSIFICATION: Table.
COLOUR OF FLESH AND SKIN: White.
COLOUR OF LEGS AND FEET: Dark slate or black.
COLOUR OF EGG-SHELLS: White.

Short-legged fowls are met with in various countries, but as a rule they receive a very limited amount of attention, although their quaintness is attractive. They are chiefly regarded from the ornamental or exhibition point of view. It is not so, however, with the Courtes Pattes, which are bred in France by reason of their meat qualities.

Origin.—Many suggestions have been put forward in explanation of the origin of the Courtes Pattes (*Anglicè*, short feet), but there is nothing definitely known. In a letter which appeared some years ago* it was stated that these birds are to be met with in Brittany, Normandy, on the south of the Pyrenees, and on the sea-line of the North of France, and that it is first-cousin of the La Bresse, 'with a strong infusion of Dorking blood.' The Dorking influence is very doubtful, but in shape, except for the short legs, the resemblance to the La Bresse is apparent. M. Lemoine says that† it originated in Maine, in which La Sarthe is situated, and that it has been known there for a long time, but that to-day it is widely disseminated. Another French writer says‡ that 'perhaps they are related to a short-legged race of Camboge,' but of the latter we have obtained no further information. As it would appear that fowls with this peculiarity have been known from time immemorial in several parts of Europe, and certainly in Normandy and Brittany, we may conclude that the Courtes Pattes bred in La Sarthe are descended from these, but that by selection the colour has been fixed. At one period blacks, whites, and yellows were met with, but now black is the only colour bred pure. From the fact that crested specimens were seen, either the Crèvecœur or Polish were probably crossed with them.

History.—It would appear that for at least thirty years black Courtes Pattes have been bred with a large measure of purity, and the favour with which they are regarded is due to their fine flesh qualities. We have known the fowl in France for more than twenty-five years, but they have always, as now, been in few hands. Courtes Pattes were first introduced into England in 1879, but they have never become popular.

Economic Qualities.—The chief quality of the Courtes Pattes is in the flesh, which is very deli-

* 'Henwife' in *Live Stock Journal*, June 13, 1879, p. 474.
† 'La Basse-Cour Pratique,' par E. Lemoine (Paris, 1902), p. 74.
‡ 'Les Oiseaux de Basse-Cour,' par R. Saint-Loup (Paris, 1895), p. 127.

cate and beautifully white, so much so that they are used in the best Paris cafés and restaurants for a dish named *poulets à la reine*—a favourite with *gourmets*. The fowls are very hardy, the chickens precocious and quick growers under favourable conditions, but the small size is against them on markets where a larger body is demanded. The hens are fair layers of fair-sized, white-shelled eggs, and make excellent sitters and mothers.

Description (Fig. 34).—In body the Courtes Pattes cock is large, long, and deep, the breast prominent, with large, powerful wings carried rather low; the neck is short and thick, well covered with hackle; head long and neat, ornamented with a large single comb, regularly indented, upright in the male and falling over in the female; beak short, slightly hooked, and brown in colour; wattles large and long; eye bright red and bold; earlobes large, white in colour; tail large, well furnished with sickles in the male, and carried high; legs are very short, giving an almost duck-like appearance to the bird; four toes on each foot, and legs and feet dark slate in colour; the plumage is entirely black, with bright green reflections; and the general aspect is vigorous and haughty. Weight: males, 3 to 4 pounds; females, $2\frac{1}{2}$ to $3\frac{1}{2}$ pounds.

HOUDAN.

Nomenclature: In all countries, Houdan.
Variety: One.
Classification: Non-sitting.
Colour of Flesh and Skin: Creamy-white.
Colour of Legs and Feet: Pink-white, mottled with blue or black.
Colour of Egg-shells: Dead white.

The Houdan, both in its native country—France—and in Britain, appeared as if it would step into the first rank of domestic poultry, as measured by general distribution and universal popularity for utility purposes, but it has failed to reach the position anticipated for it, and has lost ground considerably of late years. In the United Kingdom a reasonable explanation can be found, as seen below.

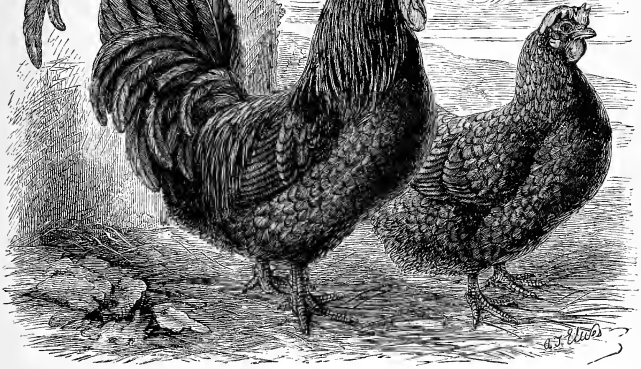


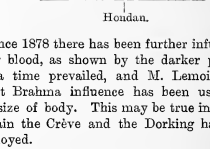
Fig. 34.—Courtes Pattes.

Origin.—Many suggestions have been put forward as to its descent, some of which were due to characteristics found in other breeds, and the inference was accepted that these breeds had been used in making

the Houdan as we know it to-day, but without a particle of direct evidence. From the fact that it has five toes on each foot the Dorking has been claimed as one of its ancestors, and the crest has suggested descent from the Polish.* But later observations have shown that we cannot fully accept these statements. That the fowl originated in the Seine-et-Oise department of France seems to be undoubted, and at one period it was almost universal there. M. La Perre de Roo says † 'that some authorities suggest that it has descended from the Padoue (Polish), from which it has inherited the crest; and also the Dorking, from which it has taken the peculiarity of the fifth toe. But all is pure conjecture without any positive proof, and its relationship with the Dorking is very doubtful, because it has neither the comb, the plumage, nor the form of body of that breed. It is certain that the Houdan has existed in Beauce for centuries, taking its name from the little town of Houdan, chief of the canton, arrondissement of Mantes, Department of Seine-et-Oise, where large quantities of fowls of this race are raised and fattened for the Paris and London markets.'

Although M. La Perre de Roo adduces no evidence in support of the claim for the antiquity of the breed, it is not improbable that birds of this type have been known for more than a century in the Houdan district, where poultry-breeding has for long been an important industry. We have already seen that the Polish fowl was at one time common in Normandy,‡ and doubtless was distributed over a wide area; also that the late Charles Darwin classed the Houdan as well as the Crèvecœur as sub-races of the Polish. Our view is that the descent was through the Crève, not direct. That Crève influence has been used in later years is undeniable, both in France and England, but our present purpose is to learn the prior origin. It should be remembered that French authorities claim that the Dorking was received into the South of England from Normandy, that it has been bred there since the time of the Roman occupation of Gaul, and that five-toed fowls of this type have been known in Northern France for many centuries. In support of this statement M. La Perre de Roo speaks § of the 'race commune à cinq doigts' (common fowl with five toes) as follows: 'The breed is characterized by the peculiarity of a fifth toe which she carries on each foot, and is found in the neighbourhood of Courtrai, Bruges, Ghent, and other Belgian towns, and also in the northern departments of France, where it has a high and well-merited reputation.'

So nearly allied does this author regard it with the Dorking that he uses the same illustration for the Silver-grey Dorking hen and the common five-toed hen. Perhaps this may explain the striking preference in France for Silver-greys, as Dark Dorkings are seldom seen; but we must confess that in our peregrinations in France we have not met with the type to the extent here suggested, although fowls more or less of this shape and colour of plumage are found in all countries. It is impossible to decide whether the Dorking came to Britain from France, or was brought direct by the Romans, but we do know that large numbers of Dorkings have been sent to France from this country in recent years. M. Mégnin, in 'Élevage et Engraissement des Volailles,' mentions the common five-toed fowl as one of the progenitors of the Houdan. Taking the evidence so far as obtained, the following table of descent may be accepted:



Since 1878 there has been further infusion of Crèvecœur blood, as shown by the darker plumage which for a time prevailed, and M. Lemoine* says that Light Brahma influence has been used to increase the size of body. This may be true in France, but in Britain the Crève and the Dorking have alone been employed.

History.—It may be accepted that the Houdan was widely distributed over Southern Normandy in the early part of last century, but would appear to have been introduced into Britain about 1850. At first they were known as the Normandy fowl, of which Wingfield and Johnson thus speak:† 'The old birds are entirely speckled in black and white; they have a small erect top-knot, not drooping backwards like a lark-crest. The plumage of the male bird is much darker than that of the hen. In shape they are lengthy, but become contracted towards the tail. The cock's tail is of great length; his comb and wattles are also of large size. The chickens are very peculiar, having at first perfectly black backs and white breasts,‡ but they gradually become speckled, like the old birds. They have five claws, and the skin of the leg is pied black and white.' They are mentioned under the same name by Moubray (edition 1854), Ferguson, and other writers of that period. No reference is made to the shape of the comb, which is characteristic of the breed, but descriptions were not very precise. They were first brought prominently forward by Mr. Geylin in 1865, in a pamphlet entitled 'Poultry-breeding from a

* *Vide* 'The Houdan Fowl,' by Chas. Lee (London, 1874), pp. 9-10; and 'Practical Poultry-Keeper,' by Lewis Wright (London, 1885), p. 190, etc.

† 'Monographie des Races de Poules,' par V. La Perre de Roo (Paris, 1902), p. 79.

‡ See Crèvecœur.

§ 'Monographie des Races de Poules,' par V. La Perre de Roo (Paris, 1902), p. 39.

* 'La Basse-Cour,' par E. Lemoine (Paris), p. 69.

† 'The Poultry Book,' by Wingfield and Johnson (London 1853), p. 225.

‡ A characteristic of Houdan chicks.—E. B.

Common Point of View,' in which it is stated that they have a triple comb, 'the outsides opening like two leaves of a book, and the centre having the appearance of an ill-shaped, long strawberry'—the first reference to this peculiar form we have been able to trace. In the first edition of Wright's 'Book of Poultry' (1874) it is stated that 'when first imported the fifth toe was very uncertain,' and in the last edition (1902) Mr. S. W. Thomas says that 'twenty years ago a leaf-comb was quite the exception'; but we bred Houdans in 1875, and then the leaf-comb was general, as also the fifth toe, as proved by the illustrations published about that period.

Thirty years ago, taking its economic qualities into consideration, it was anticipated, and not without reason, that the Houdan would become almost universal in this country, and for a few years it obtained a large measure of popularity; but, for reasons given below, that has not proved to be the case, neither as an exhibition or utility fowl. With a few exceptions, it is only bred to a limited extent, and in France also other breeds—notably the Faverolles—have taken its place. But it has yet considerable value for crossing purposes.

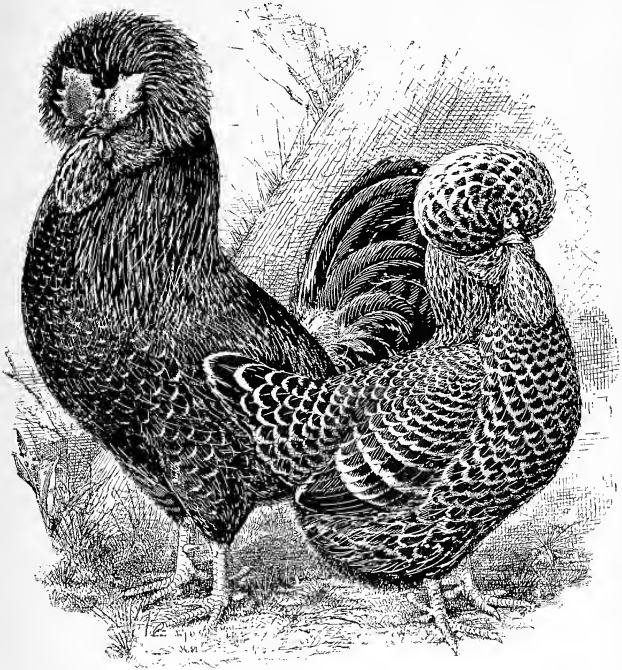


Fig. 35.—Houdans.

Economic Qualities.—The Houdan in this country has always been recognised as a most useful

fowl, and had it not been for the crest, we believe that it would have attained a much greater amount of popularity, more especially amongst utilitarian poultry-keepers. It is a good layer of large-sized eggs, and makes an excellent table fowl. In neither direction does it compare with what may be termed specialized breeds, but with the combination of these two qualities it is specially suited to farmers, and also from the fact that the chickens are precocious. The one drawback to the breed has undoubtedly been the crest. In a moist climate such as we have in the United Kingdom crested fowls need special care in that they should be sheltered during wet weather, otherwise the rain, passing between the feathers of the crest, makes them more liable to cold. All this involves trouble, and although some breeders, as a matter of course, cut the feathers from the heads of Houdans, still, the majority of people cannot trouble themselves in this way. To some extent the same is found in France, and it is suggested by some writers that Houdans do better in a dry climate and upon dry soils. There can be no question that, for practical purposes, with the exception just referred to, the Houdan is a most valuable breed, and as the smaller-crested birds are found the better for practical purposes, anyone going in for Houdans would be wise to select these in preference to the larger-crested show-birds. M. Lemoine* thus speaks with regard to this breed:

'At Houdan a large portion of the eggs are hatched by turkeys, and breeders regularly compel the turkey-hens to hatch when required. The Houdan chicks are very precocious, and they take fattening well at the age of four months. The food employed is generally barley-meal mixed with milk, but the fattening is not pressed to a very high extent. The poulterers seek, above all, what they call the "soft pullet," which is sold very easily.'

In the Houdan district large numbers of chickens are raised in winter for the spring markets, and at one time—to a greater extent formerly than now—the Houdan was chiefly depended upon for this purpose, as its quickness of growth, light bone, and excellent flesh qualities, make it very suitable for that special trade. Hatching usually commences in October, and continues until March—that is, the hatching of chickens intended to be killed—but birds bred to be used as breeding-stock are not usually brought out until March and April, and the pullets are depended upon to produce the early eggs in the autumn. These young pullets are mated with two or three year old cocks in October, to minimize as far as possible their immaturity, to which the measure of loss of vigour noted in recent years can be attributed. As already stated, hatching is largely by means of turkeys. The eggs of Houdans are of a dull white colour, and are of a good size, averaging in adults nearly 2¼ ounces.

* 'La Basse-Cour Pratique,' par E. Lemoine (Paris), p. 68.

The following description of the method of feeding chickens will be read with interest:*

'The food employed for chickens consists of stale breadcrumbs mixed with hard-boiled eggs and cooked rice, and plenty of boiled milk, which, however, is often given with bread alone. This food is continued for eight to ten days, when the eggs and rice are stopped, and after that time fine barley-meal mixed with skim-milk is given alone. Boiled milk, however, is continued several times per day during the next three or four weeks, which is found very appetizing and beneficial. . . . At the age of three and a half to four months the birds are fatted.'

For crossing purposes the Houdan is found very useful, and some of the best layers we have known were Leghorn-Houdans, and excellent table chickens are produced by mating the Dorking or Indian Game or Wyandotte with this breed. Unfortunately, in confinement the Houdan is very prone to the objectionable habit of feather-eating. It is desirable to note that the smaller-sized hens are usually the better layers.

Description (Fig. 35).—In describing the Houdan, we must not forget that considerable modifications have taken place in birds bred in England. This is not peculiar to the Houdan, nor yet to fowls, as it is seen in other directions also, but more has been done in this case to change the type than is usual. Of late years the French Houdans have been brought more into character with the English than was formerly the case. The following description of the French Houdan is taken from M. Lemoine's work:†

'The Houdan cock has a fine presence, somewhat proud, carrying the head high; beak is a little curved; the breast large; the feet short, strong, carried widely apart, and with five toes, of which the three anterior rest upon the ground, and the two hind-toes are well separate; it carries a crest of fine feathers, falling backwards; the whiskers are fully furnished, the beard standing well out; the comb is fleshy, and represents the shell of an open mussel, a little serrated at the edges; in the middle of the two parts of the comb which compose it there is a third rudimentary comb; the wattles are long and red; the earlobes white, short, and covered by the whiskers; the plumage is black and white mixed, regularly marked, some of the feathers being white and some black, but they are black and white, not grey.'

The legs are pinky-white, mottled with black. The Houdan hen is in all respects similar to the cock, with the differences of sex. When we examine the English Houdans it is to find that the type, as already stated, has been considerably modified. In the first place, the comb is much more defined, and the crest very large in comparison with those bred in France. In all

* 'La Basse-Cour Pratique,' par E. Lemoine (Paris), p. 71.

† *Ibid.*, pp. 66-67.

cases there is the tendency to incline backwards, and thus to fully expose the comb; but, instead of the more scanty crest seen generally upon French Houdans, there has been a large increase in size, and, without giving it the shape of the Polish crest, making it a more prominent feature. This has undoubtedly been arrived at by crossing the Crève into the Houdan.

A further point is seen in that the majority of English Houdans are much darker than those met with in France. At one time there was the same tendency across the Channel, but this has been abandoned, and the lighter-plumaged birds are preferred.

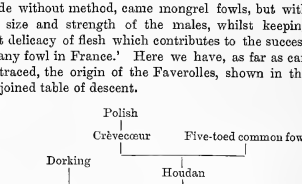
We think that there has been an improvement in the colour of the legs, which at one time were rather inclined to be too dark; but now it is recognised that pinky-white, mottled with blue or black, is much more in accordance with the birds themselves. The general shape and carriage of the bird is bold and active. Weight: males, 7 to 9 pounds; females, 5 to 7 pounds. But as Houdans have always been recognised as good layers, considering their table qualities, an undue increase in size would be undesirable.

FAVEROLLES.

NOMENCLATURE: In all countries, Faverolles.
VARIETIES: Salmon, Light, Black.
CLASSIFICATION: General Purpose.
COLOUR OF FLESH AND SKIN: White.
COLOUR OF LEGS AND FEET: White.
COLOUR OF EGG-SHELLS: Dark cream.

For more than twenty years we have been familiar with a fowl in France bearing some resemblance to the Faverolles, but which was regarded as a mongrel, the result of indiscriminate crossing. About 1886 the name began to be given in the Paris markets to birds having a distinctive character to the Houdan. In that year the late Mr. Alexander Comyns, B.A., the editor of *Poultry*, went on a quest, but his account* confirmed our own observations, namely, that no fowls could be found deserving separate recognition. Since that time, however, much has been done both in France and England.

Origin.—Some of the leading French writers on poultry do not recognise the Faverolles as worthy of notice, but we are fortunately able to obtain information from other sources. It is generally accepted that the breed owes its existence to a variety of crosses made upon the common fowls of the Seine-et-Oise and Eure-et-Loir districts of France, where poultry production is a most important industry. M. Cornevin† says that it has been formed by crossing either between the Dorking and the Cochin, or the Houdan with the Cochin and Langshan. Neither of these crosses would account for the Faverolles, which has characteristics due to none of the breeds named. In the article by the late Mr. Alexander Comyns referred to above he says, speaking of the fowls found in the Houdan market, that (1886) 'they are cross-breds, showing a trace of Houdan, Dorking, Brahma, and sometimes Cochin,' with indications of what he terms Cossacks, but which we believe from other evidence to have been single-combed Crèves, and he adds that he 'saw a great many black, single-combed, bearded birds of good size.' In a work published about twelve years ago M. Rouillier-Arnoult, of the Poultry School at Gambais, says* that 'to get a true explanation of the breed it is necessary to go back about forty years. Faverolles then possessed a common race of fowls and Houdans. When the great feathered races of Cochins, Brahmas, and Dorkings appeared, the infatuation for these fine-looking birds was excessive, and cocks were used of these breeds to cross with the common fowl, particularly with that of Houdan. From these crosses, made without method, came mongrel fowls, but with the size and strength of the males, whilst keeping that delicacy of flesh which contributes to the success of any fowl in France.' Here we have, as far as can be traced, the origin of the Faverolles, shown in the subjoined table of descent.



It will be seen that to the Dorking and Houdan influences are due the white flesh and legs and the fifth toe; to the Dorking the single comb; to the Crève and Houdan the whiskers and beard; to the Brahma the feathering on the legs and the tinted-shelled egg. Mr. J. P. L. Marx points out† that when first imported into Britain the single comb and beards were difficult to breed, and we should expect from the ancestry that there would be considerable variation.

History.—The name is obtained from a village called Faverolles, in the Department of Eure-et-Loir, about midway between the towns of Houdan, Dreux, and Noyent-le-Roi, and in a district where poultry-raising is carried on extensively, supplying a large portion of the fowls sold on the Houdan market, one of the most important in France. Faverolles were

* *Poultry*, May 21, 1886, p. 235.
† 'Les Oiseaux de Basse-Cour,' par Ch. Cornevin (Paris, 1895), p. 215.

* 'Artificial Incubation and Rearing,' par Rouillier-Arnoult (Paris), p. 33.
† 'New Book of Poultry' (London, 1902), p. 457.

gradually evolved without any definite desire on the part of breeders to establish a new breed, who had in view the production of good table chickens and winter eggs. It was stated by a visitor to that district in 1896* that 'out of ten farmers [in the Houdan country] nine keep Faverolles and one Houdans; also, 98 per cent. of the fowls on the central markets of Paris under the name of Houdans are Faverolles, cannot, however, be said that they are satisfactory to breeders, due to the uncertainty in colour, but that is always the case with new races produced by such a mixture as found in Faverolles. That is in process of correction, and the type will ultimately be fixed. We can only hope that in so doing the sterling economic qualities of the breed will not be spoiled, of which there is always a danger.

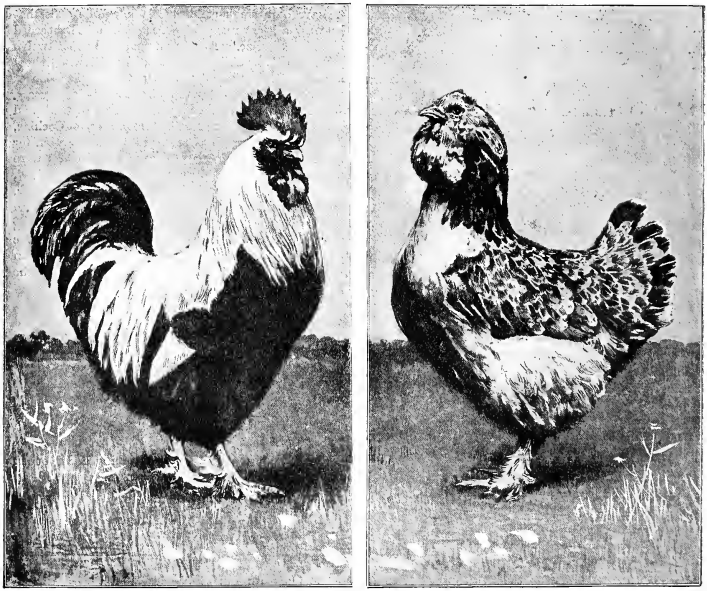


FIG. 36.—PAIR OF FAVEROLLES.

which weigh several pounds more than the former. About 1895 an Irish lady, who had attended the French Poultry School at Gambais, imported a number of specimens into the Green Isle, where they were found most valuable; but in the previous year they were introduced into England, since which time they have won a large amount of favour among practical poultry-keepers, due to their hardihood and prolificacy. It

* *Feathered World*, October 23, 1896, p. 438.

Economic Qualities.—The Faverolles is essentially a business fowl, bred by reason of its hardihood, prolificacy, rapidity of growth, and fattening quality. A French writer has said that 'as idea, farmyard fowls they started unrivalled, their superiority being uncontestable, having large size, early maturity, excessive hardiness, good laying properties, superior quality of flesh, splendid sitters and mothers. No fowls, either, are better adapted for cold countries-

owing to their small combs not being liable to be frozen, and on account of their downy and warm feather clothing.'

These claims have been fully supported by our experience in all parts of the United Kingdom, and the absence of crest, which has been so fatal to the Houdan in our moist climate, makes the Faverolles the most suitable French fowl for our conditions yet produced. The chickens are quick in growth, and very fleshy. As crosses they are excellent. In the spring of 1904, in an experiment made at the College Poultry Farm, Theale, the Faverolles Buff Orpingtons made the most rapid growth out of sixty birds. Five cockerels of this cross attained an average weight of 2·9375 pounds and eight pullets an average weight of 2·3203 pounds in twelve weeks. The hens are very prolific layers, more especially in winter, of medium-sized eggs, and make excellent sitters and mothers.

Description.—In body the Faverolles is large, broad, and deep; the breast is broad, prominent, and with a deep keel; the back broad at the shoulders, flat, and square; wings rather small and carried well up; the neck is short and thick, well covered with hackle; head short and broad, with no crest, and a short stout beak, horn in colour; comb single, moderate in size, evenly serrated, and fine in texture; wattles small and fine; it has thick, full beard and muffs, short, and standing well out; earlobes white and small, hidden by the whiskers; the tail is full, with broad medium sickles; legs medium in length, wide-set, and strongly built, but not heavy in bone; toes five, firmly placed; the outer sides of the legs, which are pinky-white, and the outer toe on each foot, are sparsely covered with soft feathers, but there should be no appearance of hock feathers on the thighs; the carriage is sprightly and active, but the birds are very tame, and can be kept easily in confinement. Weight: males, 6½ to 8½ pounds; females, 5 to 7 pounds. At first birds of all colours were met with—partridge, salmon, red, ermine, black, and white—but selection is gradually eliminating all but those named below.

Varieties.—As already stated, there is great divergence of plumage, but the following are now attaining greater evenness of colour. In all the beak is horn, the legs and feet pinky-white, combs and wattles red.

Salmon (Fig. 36).—In the cock, breast, wing-bar, primary feathers, thighs and under-fluff, and tail black; beard and muffs black, ticked with white; hackles and wing-bows straw; back and shoulders a mixture of black, white, and brown. Hens largely wheaten-brown.

Light.—Like the light Brahma, namely, silvery-white, but with striped hackles, and wing feathers and tail edged with black.

Black.—Self-coloured.

MANTES.

Nomenclature: Mantes.
Variety: One.
Classification: Table.
Colour of Flesh and Skin: White.
Colour of Legs and Feet: Pinky-grey, mottled with black.
Colour of Egg-shells: White.

Origin.—The origin of this breed is difficult to trace. In appearance its affinity with the Houdan seems to be unquestionable; but, excepting the plumage, there are considerable differences. M. Voitellier, who had the honour of first bringing it before the public, says* that it was not derived from the Houdan, in which statement he is supported by M. La Perre de Roo, who says† that it has been known for a long period in the Department of Seine-et-Marne, around the little town of Mantes. Our opinion is that it owes its origin to the same progenitor as the Houdan, but has been bred on different lines for the purpose of meeting the demand for a non-crested fowl, and that at some period another breed—probably the Bresse—was introduced as a cross. Upon that question, however, we have no definite information.

History.—The Mantes fowl was brought to the notice of the public in 1878, since which time more careful selection has been made, and it is now largely met with in the district giving it the name. So far as we know, it is not bred elsewhere.

Economic Qualities.—M. La Perre de Roo thus speaks of the Mantes fowl:‡

'Hardier than the Houdan, lively, alert, with a handsome appearance, beautiful plumage, of a good size, a good layer, excellent as a sitter and mother, the Mantes fowl has in the highest degree all the qualities necessary for a farm fowl. It thrives well in nearly all climates, and those who have tried it speak well of it. With light bone and a square form, breeders who are known as producers of large quantities of flesh of the first quality are favourable to it. With a remarkable precocity and a surprising adaptability for fattening, at the age of three months a Mantes fowl, bred at the right season, can be brought in a few days, without much effort, to a perfect condition for killing. Its flesh is of a beautiful whiteness, fine, delicate, and as highly esteemed by gourmets as the best Houdans or Crèvecœurs. It is not surprising that this breed has been placed among the first by gourmets and breeders as one of the best for the table.'

A fowl is met with in some parts of Normandy to which the name De Gournay has been given. It

* 'Incubation Artificielle,' par Voitellier, eleventh edition (Paris, 1894), p. 190.

† 'Monographie des Races de Poules,' par V. La Perre de Roo (Paris, 1902).

‡ *Ibid.*, pp. 84-85.

would appear to be an offshoot from the Mantes fowl, but smaller in size, and does not require separate description.

Description.—In shape, size, weight of body, and colour of plumage, it closely follows the Houdan, except that it is rather longer in the neck and leg, and more upright in carriage. There is no crest upon the head, and the comb is large and single, standing upright in the male and falling over in the female. It has large beard and whiskers, as in the Houdan. The legs and feet are pinky-grey, mottled with black, and only four toes are found on each foot. The absence of crest is a distinct advantage in a moist climate.

CAUSSADE (OR GASCOYNE).

Nomenclature: Caussade.
Variety: One.
Classification: Table.
Colour of Flesh and Skin: White.
Colour of Legs and Feet: Blue-grey.
Colour of Egg-shells: White.

Origin.—Upon this point we have no evidence, but, with the exception of size of body and short legs, these birds bear considerable resemblance to the general type of fowl found on the northern shores of the Mediterranean Sea.

History.—The breed is found in the Department of Gaud, in the province of Languedoc, in the South of France, west of the Rhone Valley. It is said to be bred there to a limited extent.

Economic Qualities.—A good layer, but a poor sitter and mother; flesh white and good in quality. It is hardy and precocious.

Description.—Small in size of body, with very short legs and neck, the Caussade is peculiar in appearance; plumage entirely black; comb small and single, standing upright in both sexes, though it frequently hangs a little on one side in hens after they have passed the second year; wattles somewhat long, and, with the comb and face, are bright red; earlobes white and long; legs and feet blue-grey.

FRENCH CUCKOO.

Nomenclature: Coucou de France, Coucou de Bretagne, or Coucou de Rennes.
Varieties: Bretagne, Rennes.
Classification: General Purpose.
Colour of Flesh and Skin: White.
Colour of Legs and Feet: Pinky-white.
Colour of Egg-shells: White.

In the north-western provinces of France is found a fowl which goes under the various designations given above. The two varieties are often described separately, but that they are the same is unquestionable. Some French authorities deal with them separately, or mention one variety only, but others recognise both. M. La Perre de Roo says:*

'There exists two varieties, which are only different in that the comb is rose in both sexes of one, and single, upright, and extremely well developed in both sexes of the other.'

Origin.—We have no authoritative information as to the origin of the French Cuckoo, but it is claimed as one of the oldest races of France. From what may be termed the natural conservatism of the Brittany people, who are very little affected by external changes, and adhere firmly to their ancient customs and animals, this opinion would appear to be very reasonable. The peculiarity of cuckoo plumage is, however, by no means rare, and among fowls in all countries birds so distinguished are to be found. In France, in Britain, in Belgium, and in America, recognised breeds are well known, and have attained considerable popularity. As has been pointed out, in general cuckoo-plumaged fowls are very hardy, and the coloration is very persistent. From its appearance, there does not appear to have been any recent crosses introduced into the Coucou de Bretagne.

History.—Whilst cuckoo fowls are by no means unknown in other parts of France, this variety is met with almost entirely in Brittany, where it is regarded with great favour by the peasantry. The rose-combed variety, generally called 'Coucou de Bretagne,' or 'Coucou de France,' is chiefly found in the northern part of the province, whilst the single-combed variety is bred almost entirely in the southern districts around the city of Rennes.

Economic Qualities.—The fowl is very hardy, vigorous, a good forager, loving to seek for its food, and to wander widely afield. The hens are excellent layers, producing fine large eggs, but they are very unreliable sitters and mothers, and do not become broody early. The chickens are fairly precocious, and can be reared without difficulty. They find a large amount of natural food, and are accustomed to very plain diet. The birds fatten well, and the flesh and skin is very delicate and white, whilst the weight of bone is small. One special feature of the breed is that both males and females remain in profit longer than is usual, showing great vitality. The Bretons regard it as one of the most useful breeds of poultry.

Description.—In body the fowl is of medium size, with a good frame, well developed in front, much slighter behind, with limbs very fleshy; the neck is short and thick, well covered with hackle; the head and beak are thick and rather short, surmounted by a large comb; the wattles are of medium length, and

* 'Monographie des Races de Poules,' par V. La Perre de Roo (Paris, 1902), p. 56.

bright red, as are the comb and face, which latter is bare; the earlobes are small, usually white splashed with red; the tail in the male is well furnished with long sickles; the legs are short and strong, without giving the bird a dumpy appearance, and are pinky white in colour; there are four toes on each foot, and the legs and feet are clean; the whole of the feathers in both sexes have a ground colour of steel-grey, barred across with blue-black. Weight: males, $5\frac{1}{2}$ to 7 pounds; females, 4 to $5\frac{1}{2}$ pounds.

Varieties. — The difference between the two varieties is entirely that of the comb.

Coucou de Bretagne has a large rose comb, carried well in front over the beak, and with a spike behind. It is set firmly on, and covers the top of the head.

Coucou de Rennes has a large single comb, upright, carried well in front and behind, and evenly serrated with deep cuts.

BOURBOURG.

Nomenclature: Bourbourg.
Variety: One.
Classification: General Purpose.
Colour of Flesh and Skin: Creamy-white.
Colour of Legs and Feet: Pinky-white.
Colour of Egg-shells: Salmon-tinted.

Origin.—Although we have no direct evidence as to the origin of this breed, which is acknowledged to be the result of a cross, it is undoubtedly true that much is due to the Light Brahma, as shown by the colour of plumage, shape of body, and leg feathering. From the appearance of the fowl we should deduce that the Brahma was crossed upon single-combed, small-bodied birds of the type common in the border districts of France and Belgium, similar in many respects to the Brackel and Campine.

History.—The Bourbourg fowl is now increasingly bred in the Pas de Calais—that is, the part of Northern France lying between the port of Calais and Belgium, in the neighbourhood of Bourbourg, Bergues, Ardres, Saint-Omer, and Hazebrouck, where it is very popular, and nearly all the fat fowls supplied in the Lille and Dunkirk markets are of this variety. Essentially a bird for practical purposes, it has secured its present status by its sterling economic qualities.

Economic Qualities.—It is claimed that this race of fowls is very hardy, tame, yet a good forager, and especially suited for farms. The hens are good layers as a rule (but in this respect there is considerable variation) of pretty salmon-tinted shelled eggs, which are of medium size. Of late years there has been a large increase in the supply of tinted-shelled eggs of fine quality from the Pas de Calais, and they appear to be produced largely by the Bourbourg fowl. The hens sit early, are very faithful as mothers, but only become broody about twice in the year. The chickens are precocious, quick in growth, and produce a considerable amount of flesh, fattening well; but as the prices for chickens in that district are not so high as elsewhere, the birds are not fatted nearly to the extent common in other parts of France. The Bourbourg fowl meets a demand for second and third quality poultry, giving large size without extreme flesh development, which can only be obtained by careful fattening, but for which any General Purpose breed is unsuitable. In order to profitably meet such demand a vigorous, quick-growing fowl is necessary, and in the Pas de Calais this appears to be principally met by the Bourbourg.

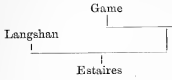
Description.—The Bourbourg is a full, medium-sized fowl, with longish body, standing on rather short legs, following the Asiatic type in that it is somewhat upright and flat in breast; the back is flat and large; the neck is medium in length, stout, well arched, and abundantly covered with hackle; head large and short, with a short, strong, well-curved beak, which in colour is pinky-white, with several lines of pale brown; comb single, upright, well serrated, and rather large, following the lines of the skull; wattles medium in size and bright red, as are the comb and face; eyes large and bright; there is a small beard of fine feathers growing upwards; the tail is of moderate size, carried closely, furnished with sickles of medium length; thighs stout, well feathered, but not bocked; legs strong and stout, covered on the outer side with short feathers, and pinky-white in colour; the toes are long, and four in number; in colour of plumage the Bourbourg closely follows the Light Brahma, namely, the head, back, saddle, breast, chest, abdomen, and thighs are silvery-white; the hackles are white striped with black; the primary and secondary feathers of the wings are black, with outer feathers white, and the tail is black, on the outer sides touched with white. Weight: males, $6\frac{3}{4}$ to 9 pounds; females, 6 to 7 pounds. The constant tendency in these birds is to follow the Asiatic type, more especially in shape of body, in comb, and in colour of legs.

ESTAIRES.

Nomenclature: *French*, D'Estaires.
Variety: One.
Classification: Table.
Colour of Flesh and Skin: White.
Colour of Legs and Feet: Blue.
Colour of Egg-shells: Brown.

Origin.—In this case we have the same basis as in the breed above described—the Bourbourg—but it would appear that both the Game and the Langshan have been employed, and the prepotency of the last-named fowl is evident, as in body, shape, and colour of plumage it is closely followed. Among the poultry-

breeders of the Estaires district, with a view to the improvement of table qualities, the Game was introduced and crossed with the common fowl of the district, and afterwards the Langshan, so that the descent of the race may be shown by the following table:



History.—The breed is not bred over so wide an area as the Bourbourg, and is found chiefly around Merville, La Gorgue, Estaires, and Laventie, where are produced the finest table fowls sold on the Lille and other markets of the Department du Nord. These are the birds which are afterwards sold there under the names of 'poulardes de Bresse' or 'chapons du Mans,' and in appearance they resemble closely those races when dead, more especially the last named. So far as we are aware, they are not met with elsewhere, and have been produced within the last ten to fifteen years. That they are a recent production is proved by the frequent appearance of gold-coloured feathers, especially in the hackles.

Economic Qualities.—The birds of this race are hardy, but tame and not disposed to wander far. The hens are good layers of brown eggs, of fine quality but somewhat small, as might be expected from the Langshan influence; they make good sitters and mothers. The chickens are fairly precocious, very easily managed, and produce a fine quality of flesh, which is very savoury, and they fatten remarkably well. The pullets come into profit at an early age.

Description.—The body is large and long, with a prominent breast, short tail, and giving the appearance of a thick-set, meaty fowl; the neck is of medium length, with close hackle; head moderate in size, rather long, as is the beak; comb single, large, well serrated, and falling over in the hen, but upright in the cock, with wattles in unison, and both are fine in texture; the eye is not very prominent; earlobe small and red; legs medium in length, stout, but not heavy in bone, and slightly feathered down the outer side, as are the outer toes; in colour the legs and feet are dark blue; the plumage is bright black, with metallic reflections, like its progenitor the Langshan, but of the older type, as the long-legged modern Langshan would be regarded as useless in France. Weight: males, 7 to 8 pounds; females, 6 to 7 pounds.

HERGNIES.

In the last edition of M. Lemoine's work he refers to a breed which we do not remember to have seen, but which, from the description, is evidently related to the Campine or Brackel. We therefore translate the following particulars:*

'The cock has a short beak, colour horn; comb single, large, and upright; eye black; earlobes white; wattles round; wings white, marked with two black bars; throat white; breast white, with circular pencillings of black and grey; abdomen white and black; hackles white; sickles black, with bars of clear grey; legs dark grey.'

It is stated that the hens are good layers, and the fowl breeds very true; but as we have no further particulars, this notice must suffice.

* 'La Basse-Cour Pratique,' par E. Lemoine (Paris), p. 81.

CHAPTER VII

SPANISH RACES OF FOWLS

Castilian
Black Spanish
Minorca
Andalusian
Barbezieux
Prat

AT one period it was usual to designate as Spanish nearly all animals and products brought by sea from beyond the Bay of Biscay, and traders who imported goods from the Mediterranean were termed 'Spanish' merchants, as the traders who imported from the Orient were named 'Turkish' merchants. Hence the fact of certain races being called by Spanish names was no proof of the place of origin. But in this case the designation is largely correct, for the races which have been usually called Spanish undoubtedly originated in the Peninsula. It must be remembered in this connection that Spain was at one time the dominant Power in the world, that she was mistress of the seas, that great portions of the earth owed her allegiance, and her influence was greater than that of any other nation. As a consequence, intercommunication between Spain and other countries was very great, increased by her geographical position.

From what we have seen by personal observations in Spain that country is scarcely likely to be specially suitable for poultry, except around the sea-coast, where the conditions are more favourable than is the central tableland and among the Sierras. The fowls found in the country, however, are almost entirely of the light-bodied, egg-producing type. During our stay in the country we never saw, either alive or dead, a fowl worthy of the name for table purposes, and those met with both in the rural districts and the markets of the great cities were small and poor in flesh properties. The better birds found in hotels near the Pyrenees are almost entirely imported from France.

It is interesting to note the remarkable uniformity of type found along the northern shores of the Mediterranean Sea. Our observations have extended from Spain to the Balkan States, and we are informed that a similar form of body is met with as far as Greece. The Spanish fowls, the Bresse in France, the Leghorn in Italy, the common fowls of Austria, and the Magyar in Hungary, have remarkable resemblances varying in minor details as well as coloration of plumage, but with uniform characters and qualities. Nor is this surprising, as the conditions are very similar, and intercommunication was easy between one country and another. Even the great natural barrier of the Pyrenean Mountains would not hinder interchange or spread of animals, for the sea was at hand. Moreover, for a couple of thousand years the relationships between Italy and Spain, commercially and politically, have been very close indeed, which fact may explain why the Spanish and Italian fowls are more nearly alike than is the case of either with the French. We have, however, deemed it more satisfactory not to classify all the Mediterranean races together, but to group them nationally. The fact that they have a close affinity should, however, be kept constantly in mind.

CASTILIAN.

NOMENCLATURE: *Spanish*, Castilian; *German*, Castellana.
VARIETIES: Black for choice.
CLASSIFICATION: Largely non-sitting.
COLOUR OF FLESH AND SKIN: Grey.
COLOUR OF LEGS AND FEET: Black.
COLOUR OF EGG-SHELLS: White.

Although it is generally admitted that the difference between this breed and the Minorca, as it has been called in Britain, are slight, and that the two are practically the same, yet, as the Castilian appears to be the original type, not only of the Minorca, but other breeds to be noted, we must accord it separate consideration. It is probable that in the future, as greater attention is paid to poultry in Spain and more care is taken in the selection of stock birds, the tendency will be to the Minorca type. In fact, during

our visit to Spain we had evidence that English-bred birds were being introduced to rejuvenate the native fowls, and at the great exhibition held at Madrid in 1902 the advertisements of the show and the medals awarded at it displayed a fowl which differed but slightly from those with which we are familiar, a smaller size of comb and more upright body marking the only apparent variations. But what was manifest during our travels in that country is that this is the common class of fowl met with, the great majority of birds being black in plumage, dark in leg, and having a single comb.

Origin.—We have no direct evidence as to the origin of this fowl, but in Spain it is believed by many that it was first introduced during the time when the Moors held that country, and it is often called the 'Moorish' fowl. It is widely distributed throughout Old Castile, which comprises a great part of the table-land to the north of Madrid, as well as Andalusia; and Don Salvador Castello, Director of the Poultry School at Barcelona, says* that it was formerly known in the province of Ciudad Real and Zamora. In the last named it is frequently known under the name of 'Zamorana.' But, as already noted, birds more or less of the same type are very widely distributed, and may be accepted as the common fowl of the country. Whilst the majority are black in plumage, there is considerable variety in coloration and markings, as is customary where care in selection is not made.

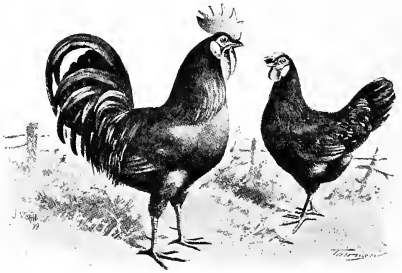


Fig. 37.—Castilian Fowls.
(*From 'Avicultura.'*)

History.—Practically nothing can be said under this head. That birds of this race have been bred for centuries in Spain is evident, but without any special attempt, so far known, to fix qualities, though, as a rule, the presence of one type indicates that a measure of selection has taken place. We shall presently see how far the Castilian fowl has influenced other races.

Economic Qualities.—The Castilian is essentially an egg-producer, but, whilst in its native land the claim is made that it is the most prolific of all races, we have not been able to obtain any definite figures as to the number produced per annum. That it is a good layer is evident, but whether by natural or artificial selection this faculty has been developed we cannot tell. Mr. Lewis Wright suggests* that the development of egg qualities is due to 'the prevalence of the Roman Catholic religion, which permits the use of eggs when flesh is forbidden,' but that statement is hardly borne out by the fact that in France, Belgium, Southern Germany, and Austria, where Roman Catholicism is preeminent, the production of table poultry of one form or another is extensive. The eggs, however, are not of first-rate quality, which is explainable by the dry, arid soil in Central Spain. They are large in size. The meat qualities of the Castilian fowl are very mediocre, as the flesh is scanty, dry, and poor in quality. The hens rarely sit, and they are unreliable mothers. In fact, as we have shown with regard to the Leghorn, in Italy, only a moderate percentage of the hens evince the maternal instinct. Considerable improvement has taken place by the mating of English Minorca cocks with Castilian hens. It is stated that the fowls are hardy, but are evidently slow in feathering, a characteristic of the races descended from the Castilian.

Description.—The fowls, more especially males, are tall, slight in body, flatish in front, with rather long legs, and very active. They are, like their owners, proud in carriage; the comb is upright in the male, falling on one side in the female, but small-medium in size; the face is red; the earlobes are white, sometimes tipped with red, but, so far as we saw in Spain, white-faced specimens are unknown; the cocks have large, well-shaped and carried sickles; the legs are well set, and the feet have four toes. Weight: males, 6 to 7 pounds; females, 5 to 6 pounds.

Varieties.—Black (Fig. 37) is preferred, and will doubtless become predominant, but Blues, Whites, and, in short, nearly all the darker hues, are met with.

* 'Avicultura,' par Salvador Castello (Barcelona, 1899), p. 110.

* 'New Book of Poultry,' by Lewis Wright (London, 1902), p. 385.

BLACK SPANISH.

NOMENCLATURE: *English*, Spanish; *French*, Espagnole; *German*, Spanier; *Dutch*, Spaantch Witwang; *Danish*, Sorte Hvidkinvede Spaniere; *Spanish*, Cara Blanca negra; *Italian*, Spagnole; *Hungarian*, Fekete Spanyol.
VARIETY: One.
CLASSIFICATION: Non-sitting.
COLOUR OF FLESH AND SKIN: Grey.
COLOUR OF LEGS AND FEET: Dark slate.
COLOUR OF EGG-SHELLS: White.

For a long period of time this breed of fowl was regarded as the representative of Spanish poultry, but the result of our inquiries and observations is to show that it is unknown in Spain, except in the bands of breeders who have imported specimens. That it is of the same family as the Castilian and Minorca races we have no doubt whatever, but the evolution has been considerable since leaving its native land, and its leading feature—the white face—has been developed at a later period.

Origin.—Many suggestions have been put forward as to the origin of this fowl. Mr. Harrison Weir says* that it 'might possibly be the breed alluded to by Columella as having large white ears, and more given to laying than sitting and bringing up their young'; but that ancient writer, so far as we know, does not refer to white on face, and his remarks would equally apply to the Leghorn or Italian fowl, to the Castilian and to the Bresse. Probably the fowl referred to by Columella was the progenitor of all these breeds, which were conveyed along the Mediterranean shores into France, and across the Gulf of Lions into Spain, there to assume the different forms we now know.

In the earlier works on poultry the name Spanish is given to fowls which had no relationship with the present-day breed. Dickson† confounds it with a crested race related to the Polish, and speaks of 'a black tuft that covers the ears,' and says it had broad round black spots on the breast, the rest of the body being velvety black. And Dixon, a dozen years later,‡ refers to birds imported from Spain in 1846 which were 'in shape and carriage very much like the Spangled Polish (except being much longer in the leg), having topknots and a tuft of feathers hanging under the throats'; but, as he says, the recognised Spanish at that time were entirely black, with white faces. Moubray, however, early in the century,§ speaks of them as 'all black, black legs, large red comb and gills,' but does not mention the white face. In the crude illustrations accompanying his work that feature is distinctly represented. Don Salvador Castello‖ says:

'This [the White-faced Spanish] is an extremely rare breed, upon whose origin it is difficult to give an opinion. It appears in all foreign works as a Spanish breed, and naturalists in old days seem to have been under the same impression when they baptized it *Gallus hispaniensis*. . . . Some say that before the discovery of America the breed existed in Spain, and the fact that it is found in Cuba and certain Republics of South America has given reason to suppose that the Spaniards exported them there. Everything is possible, but it is very curious that there is no trace of this breed either in drawings or in histories.'

He adds that he has no doubt that it must have originated from some Castilian birds which had very white earlobes and the defect of a white face. With this information we must be content, but certainly it may be accepted that the race, as we know it now, originated in birds which came in the first instance from Spain.

History.—It is evident that both in England and Holland White-faced Spanish have been known for centuries. Nor is this at all remarkable. Trade between the Peninsula and the United Kingdom has existed for nearly 2,000 years. Spanish ports were often the last points touched by ships ere they reached our shores. And at one time both in England and Ireland Spanish wines were imported freely. Further, for a long period the Netherlands were subject to the Spanish Crown, and intercommunication as a consequence was frequent, whilst the large number of Spaniards who lived in the Low Countries would naturally be the means of introducing thereto whatever was rare or of value.

Mr. Lewis Wright, who remembers the older Black Spanish, says* that they were bred in this country 'to a somewhat rough or cauliflower type of face,' but that 'a second introduction of birds with smaller and smoother faces came from Holland, precisely that district of Europe which had been most overrun by the Spanish armies under the Duke of Alva.' The revised edition of Moubray, published in 1854, and Wingfield and Johnson's 'Poultry Book,' published in 1853, both speak of the races being imported from Holland. And Mr. Harrison Weir confirms this view thus:† 'Its home for a lengthened period, as a fancy fowl, has been in the Low Countries and Netherlands, though some say Holland only (*sic*). Yet certain it is that, within the last half-century at least, the best birds were imported either from one or the other; but the breed was for many years well known and valued in England, especially among the silk-weavers of Spitalfields,' who, be it noted, were descendants of refugees from France and the Netherlands.

* 'Our Poultry,' by Harrison Weir, F.R.H.S. (London, 1902), p. 470.
† 'Poultry,' by Walter B. Dickson (London, 1838), p. 14.
‡ 'Ornamental and Domestic Poultry,' by Rev. E. S. Dixon, M.A. (London, 1850), p. 275.
§ 'Practical Treatise,' by Bonington Moubray (London, 1824), fifth edition, p. 23.
‖ 'Avicultura,' par Salvador Castello (Barcelona, 1899), p. 116.

* 'New Book of Poultry,' by Lewis Wright (London, 1909), p. 385.
† 'Our Poultry,' p. 472.

Within the last fifty years the history of the Spanish fowl has been one of steady decadence. In the fifties of last century the classes were largest of all in the great exhibitions. We believe at one Birmingham Show upwards of 300 specimens were displayed. But no race has suffered more from excessive breeding for fancy points. Everything was sacrificed to the size and texture of the white face; to secure the smoothness of face trimming became common, and to obtain pureness of white the birds were coddled to an extreme, and protected from sun and rain, just as if they were the most tender hothouse plants. Never a hardy fowl, delicacy of constitution became general, and, although the Spanish hen remains a remarkable layer of large-sized eggs, the chicks are difficult to rear, slow in feathering, unable to stand exposure, and of small value to the practical poultry-keeper. Seldom seen except in shows, they form a monumental example of the folly of excessive development of arbitrary points. The lesson is a severe one. We deal with the Spanish not merely for its historical interest, but as proving the necessity for avoiding undue exaltation of external characters at the expense of vigour and economic qualities.

Economic Qualities.—Spanish are very poor in meat properties, as the flesh is scanty and dry. The hens are excellent layers of large white-shelled eggs, but these are produced almost entirely in the spring and summer, as the fowls cannot be depended upon for winter laying. Chickens should not be hatched early—not before May—as they are long in feathering, and do not seem able to withstand cold, more especially east winds. The old birds also are slow in moulting, and sometimes may be seen almost entirely denuded of feathers. At all ages they are tender and soft; and even when the race was bred on more sensible lines they could not be regarded as hardy. But we have known cases where they were hardened by roosting in the trees all through the autumn, and the result was a great enhancement of natural vigour. Unfortunately, the tendency to weakness has been increased by the fact that Spanish are almost exclusively kept and bred in confinement, in order to protect the purity of white on the face. Practical poultry-breeders, if they desire to keep Spanish, should select the smaller-faced birds, and rear as naturally as possible.

Description.—The Spanish is a small-bodied fowl, of medium length, and full behind; the neck is long and fine, surmounted with a large, broad head, upon which is a deeply-serrated, tall comb, fitting close to the neck at the back; the wattles are correspondingly long; as already mentioned, the great feature is the white face, which in exhibition specimens not only completely surrounds the eye, but extends well behind, and, joining with the earlobe, hangs down lower even than the wattles. The skin is like the finest kid in texture, perfectly free from folds, but the smoothness is only secured by plucking the small black hairs which appear naturally. The smaller-faced birds are hardier and, in our judgment, look better, as large faces are abnormal in appearance; the legs are long, giving a 'reachy' carriage; the plumage is rather scanty, fitting close to the body, and the wings short and carried close, whilst the tail is of medium fulness, with large sickles in the male; the plumage is black throughout, with a rather dull sheen; the beak dark horn, and the legs dark slate. Weight: males, 6 to 7 pounds; females, 5 to 6 pounds.

Varieties.—Although White Spanish have occasionally been seen, the Blacks alone are now recognised. We have found references that nearly fifty years ago many pure White Spanish were kept in the Exeter district. In the 1854 edition of Monbray it is stated that 'the first White Spanish were imported in 1846,' but the proof of this statement is not stated.

MINORCA.

NOMENCLATURE: *English*, *Italian*, *Dutch*, *Hungarian*, Minorca; *French*, *Spanish*, Minorque; *German*, Minorka; *Danish*, Minorker.
VARIETIES: Black, White.
CLASSIFICATION: Non-sitting.
COLOUR OF FLESH AND SKIN: Blacks, grey; Whites, white.
COLOUR OF LEGS AND FEET: Blacks, very dark slate; Whites, white.
COLOUR OF EGG-SHELLS: White.

Origin.—Evidence has already been given showing that the Minorca as we know it is descended from the old Castilian breed indigenous to Spain. But, as shown below, it would appear that birds of this type were obtained from Minorca, which is one of the Balearic Islands off the east coast of Spain. As those islands are owned by the Spaniards, we might naturally expect the same class of fowl as on the mainland. Don Salvador Castello* makes a very interesting suggestion as to the name. 'The two breeds [Castilian and Minorca] are in my opinion identical, and whether or not the English were the first to bring them into notice on the other side the Pyrenees, we may suppose that the first birds were taken from Andalusia, and thence to Gibraltar, and that then, through a misunderstanding, the English imagined that they had been put on board at Mahon,† where possibly the vessel may have touched, and gave them the name erroneously. At any rate, it is a fact that this breed was exported, and that the English, past-masters of the art of improving a breed without destroying any of its characteristics, have succeeded in transforming it in such a manner that, although the characteristics of the two breeds are identical, yet they are instantly dis-

* 'Avicultura,' par Salvador Castello (Barcelona, 1899), p. 113.
† The capital of the island of Minorca.

tinguishable. The theory here put forth might be accepted from its probability were it not that we have evidence which controverts it. Mr. Lewis Wright, who has known the race for more than fifty years, says:* 'The late Mr. Leworthy, of Barnstaple, who had bred it since about 1830, told us that several lots had come from Minorca, and that a friend and townsman of his, a Mr. Willis, had been familiar with similar birds in the island itself.' And also that Sir Thomas Dyke Acland 'brought birds from Minorca direct in 1834 or 1835, from which a strain had been bred at Holnicote for many years, and distributed through the neighbourhood.' The Acland family believed that the introduction of the fowl into the West of England was mainly due to this importation. Further, Mr. John Harwood, of Tiverton, one of the oldest living breeders of the Minorca, and for many years honorary secretary of the Minorca Club, says† that he has been able to trace the breed in the Tiverton district as far back as 1780, when many Spanish and French prisoners of war were interned there, several of whom, after peace was declared, became naturalized Englishmen, and he believes that it was by them Minorcas were imported. In the same communication Mr. Harwood reports meeting at Plymouth nearly forty years ago a sailor who stated that he was a native of Minorca, and always liked to see these old friends of his. An old breeder in 1876 showed him a picture of Minorcas painted in 1810, of which a reproduction is given in Fig. 38, showing a very pure type of hen, but the cock represented is badly formed, too high in tail, and with an ill-shaped comb. From what has been here stated it may be accepted that, whilst the Minorca originated in Spain, and possibly some of the importations came direct from that country, perhaps brought by our armies after the Peninsular War of last century, importations were received from the island of Minorca. Hence the designation given to them. It would be well if we had as satisfactory an explanation for all poultry names.

These remarks apply to the Black variety, which was the true type, but the Whites were due to a sport, by no means uncommon in breeding black-plumaged fowls. One writer* says that in 1851 he produced a pure white bird from Blacks with which Blue Minorcas (now called Andalusians) were running, and it is probable that others had succeeded in the same way.

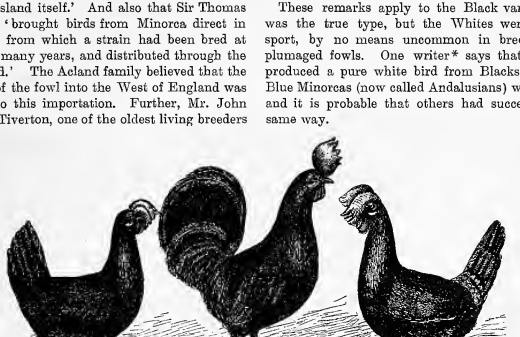


FIG. 38.—MINORCA FOWLS OF 100 YEARS AGO.
(*From an old painting.*)

History.—It would appear that for a considerable period Minorcas were known generically under the name of Spanish fowls, and afterwards as Red-faced Spanish, when the White-faced became more common. In the earlier editions of Moubray, as we have already seen,† the description would stand for the Minorca, but the illustration distinctly represents a Black Spanish. By the middle of last century these distinctions had become recognised. In Dixon's work‡ this is to some extent so. He says in the chapter on Spanish: 'In North Devon they call the Spanish fowls "Minorcas"; others call them "Portugal fowl,"' and his description is evidently that of the true Minorca, although White-faced specimens are mentioned. 'The combs of both cock and hen are exceedingly large, of a vivid and

* 'New Book of Poultry,' by Lewis Wright (London, 1902), p. 391.
† *Poultry*, February 10, 1899, p. 68.

* *Poultry*, October 23, 1888, p. 523.
† See Black Spanish.
‡ 'Ornamental and Domestic Poultry,' by Rev. E. S. Dixon (London, 1850), p. 271.

most brilliant scarlet; that of the hen droops over on one side. Their most singular feature is a large white patch, or earlobe, on the cheek, which in some specimens extends over a great part of the face.' In 1853 classes were given at the Bristol Agricultural Show for both Spanish and Minorca fowls, which is the first instance we have found of prizes offered for the two breeds distinctly.

The editor of the *Cottage Gardener*,* replying to a correspondent, said that 'the Minorca fowl of the western districts of England is a bird somewhat lower on the leg and of a rounder form than the Spanish; and the white cheek, the peculiar characteristic of the latter, is absent, the earlobe alone being of that colour.' The 1854 edition of Moubray also refers to the Minorca as a subvariety of the Spanish, and it should be remembered that the last-named breed was at that time in the heyday of its popularity, when Red-faced specimens would be regarded as untrue or inferior to the White-faced. Thence the difference was recognised, and all later works deal with the two breeds as distinct from each other.

For more than half a century the Minorca was bred only in the south-western counties of England, chiefly in Cornwall, Devon, and West Somerset, whence it gradually extended, until by 1870 it was almost universal west of the Quantock Hills, only the Indian Game dividing the preeminence where table poultry was desired. Around Barnstaple, Tiverton, Crediton, Exeter, and Tavistock, it was bred largely and carefully. In 1875 and 1876 letters in the *Live Stock Journal* brought the race prominently forward, and the efforts of a few determined breeders, together with the proof of its great value as an egg-producer, won it a host of friends all over the country.

Early in 1882 the writer first called attention to the Minorca in the columns of the *Preston Guardian*, and within a few years it became by far the most popular breed in the Fylde district of Lancashire, not for its fancy qualities, but by reason of its wonderful prolificacy and the large size of the eggs. In the manufacturing and urban districts it had no compeer until the advent of the Black Orpington, and it entirely displaced the Black Spanish under the conditions which had given that race its popularity. The first classes for Minorcas at the Crystal Palace Show were provided in 1883. Abroad it has had a considerable clientele, but never to the same extent as in the homeland. Much has been done to improve the breed by careful selection, but some of the changes have not been beneficial, as noted below. The evidence is fairly trustworthy that a certain amount of out-crossing has taken place, chiefly by means of the Langshan and the Black Orpington. The result is seen in the maintenance of vigour, although for a time the racial characters were adversely affected. The tendency to exaggerated comb, to which many breeders have been prone, has been counteracted to some extent by this means.

Economic Qualities.—The Minorca is *par excellence* an egg-producer, and it is generally admitted that, taking the weight as well as the number of eggs laid, it occupies the first position; in fact, whilst it has several rivals, so far as the number of eggs laid is concerned, there are only two, or at any rate three, breeds which yield as large eggs. In another place* we have shown that eggs from adult fowls of this breed average 28½ ounces per dozen, which figures were obtained from several breeders. In fact, many strains average more than this weight. But large size is characteristic of all the Spanish type of fowls, although our observations have shown that the fowls met with in Spain do not produce nearly so large eggs as their descendants bred in our hands. How the increased weight of eggs has been secured we have no evidence, but we may fairly assume that it was due to selection following upon change of conditions. The rich lands of the south-western counties of England and of the Netherlands would doubtless explain such increase both in the Spanish and the Minorca, if followed by careful breeding for this quality. For home consumption a big egg would naturally be preferred, but the fact is that for marketing purposes eggs from this breed are rather too large, and those weighing 2 or 3 ounces per dozen less are preferred. That is a fault on the right side, however, for in many breeds the eggs are much too small. But, further, these very large eggs are of no greater value as food than those a little less in size. Our experience is that in nearly all eggs from fowls of medium size of body the yolks are very much the same; and where eggs are very large, it is due to the white or albuminous portion being thinner. Hence the size is not a question of nutriment, but of appearance. We recognise that the quality of an egg must be largely influenced by the food supplied and the nature of the soil upon which the fowls are kept; but where the conditions are equal it will be found that a larger size does not necessarily mean an increased food value. But, allowing for this, the Minorca is one of, if not the most valuable, breed for egg production. Upon the table it is fair, which is all that can be said. The flesh is of a grey colour, but not very abundant, and it does not fatten well. But we do not expect a non-sitter to be strong in that direction.

Breeding for perfection of external characters has not been altogether beneficial. We have already noted the effect of excessive development of comb and earlobe. The injury to the breed in this direction was pointed out many years ago by the late Mr. W. J. Nichols, who wrote:† 'It has been laid down by most

* *Cottage Gardener*, May 19, 1853, p. 129.

* Poultry-Keeping as an Industry for Farmers and Cottagers,' by Edward Brown, F.L.S., fifth edition (London, 1904), p. 24.

† *Stockkeeper*, February 18, 1887, p. 92.

breeders that the lobes should be almond-shaped, rather large, smooth in surface, and a pure white. To get this clearness of lobe it is necessary that the birds should be protected from cold winds and sun—in fact, they have to be shut up and kept in an artificial state. Directly this is done the combs commence to spring, and if long confined they grow to an enormous size, eventually becoming so large and unwieldy that the base is unable to support the abnormally large growth, and then over it goes.'

But the result is not merely seen in the softness of the comb, but in general reduction of the vitality. It is generally admitted that the Minorca is by no means a hardy breed, which is equally true of the Spanish and the Andalusian. Upon this point Don Salvador Castello says:* 'My experience has taught me that although improved in other respects the Minorcas have lost somewhat in hardiness, for they turn out to be of far less all-round practical use than our Castilians. By running Minorca cocks with Castilian hens I succeeded in obtaining some valuable birds, which avoid the exaggerations in the shape of the English Minorcas, and at the same time are an improvement on our Castilian breed. Thanks to the importation of this new strain, I have improved it without diminishing its hardiness, in this way perfecting the external qualities without injuring in the very least the purity of the breed.'

This is undoubtedly true, for we have found that the Minorca is, compared with other breeds, more especially of the Italian type, unable to withstand cold, exposed situations, and that it is slow in feathering, generally a sign of weakness of constitution. It should, therefore, be selected where the conditions are favourable and there is plenty of shelter, more especially

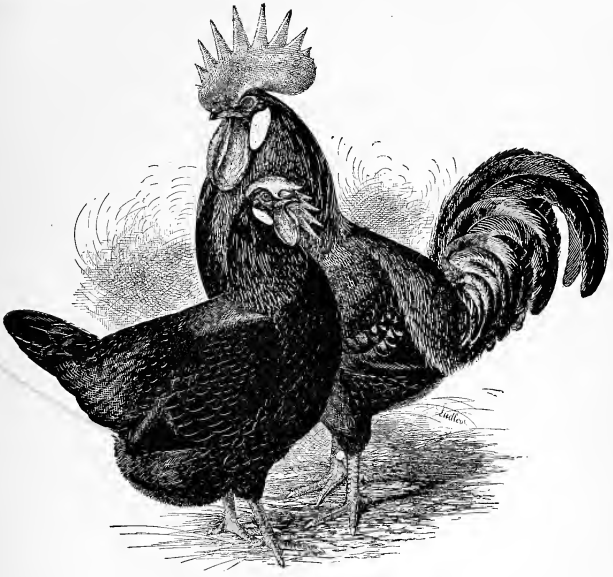


Fig. 39.—Black Minorcas.
(*Bred by Mr. A. G. Pitts, Highbridge.*)

* 'Avicultura,' par Salvador Castello (Barcelona, 1899), p. 114.

against cold winds. It might be of great service for practical purposes if Castilian fowls were imported and crossed into it. But, at any rate, the utility poultry-keeper should select birds of both sexes which are medium in size of comb and with small earlobes. In fact, if the latter are red it will be all the better, for the fowls are almost certain to be hardier than those with large white lobes. At the present time the Minorca is more suited to the Western and Southern counties of Britain than to the east coast.

For crossing purposes the Black Minorca is very valuable indeed, more especially where increase of size in eggs is desired. Care should, however, be taken not to cross with the slower-feathering races, such as the Langshan or the Black Orpington, but to mate with more vigorous breeds.

Description.—The Minorca is a full-bodied fowl, with a well-rounded breast, giving a square, compact appearance; the shoulders and back are broad, and the back long, sloping well to the tail; wings are medium in size, carried close to the body; the neck is long, well arched, and thickly clad with long hackles; the head is long and broad, surmounted by a large comb, single, carried upright in the cock, and falling over in the hen. Both by breeding and methods of treatment the size of comb has been greatly exaggerated, and many judges and breeders have sacrificed everything for size of comb and earlobe. This is a mistake. Up to a certain degree in a laying breed a large comb is a necessity, as there is a direct connection between the comb and the generative organs. But if carried too far, a reactive influence is exerted, and the strain upon the system reduces the vitality, and consequently the productiveness. In fully-grown cocks, 4 inches high by 5 from back to front is large enough, and in hens 3½ inches deep by 4½ inches long is as much as any hen can profitably support. We cannot too strongly condemn the rage for excessive size in comb, although a Minorca should have a large one in relation to her body. Combs should be well serrated; the wattles are long in proportion to the comb; the beak is stout and long; the eye full and bright; the face is bright red, without any sign of white. As Mr. Harwood has well said:* 'The face of a Minorca is its emblem of purity, the very foundation of the breed. . . . Red is red, the harder the better, and it extends to all parts of the face—from comb to wattles and beak to where the lobe adheres to the face.' Any sign of white is a blemish which ought to be stamped out. A few years ago many birds failed in this respect, and had it not been fought strenuously, the distinctive mark of the Minorca would have disappeared. Earlobes should be medium in size, and almond-shaped. It must be conceded that a pure white lobe is pleasing in appearance, but for practical purposes that is of small moment. It is merely an arbitrary point, and we believe that fowls with red or reddish earlobes are more vigorous than those which are pure white. To secure the latter, birds are often coddled to a degree, to the weakening of their constitutions. Even if we admit the white earlobe, it should be of small size, and the huge hanging folds sometimes seen in old exhibition stock ought to be avoided. The tail is full, with long, broadish sickles, carried well back; legs are medium in length, giving the appearance of a somewhat low fowl, although many birds, especially young cockerels, look stilty; the feet are well set, and the toes four in number. The Minorca is a graceful, well-proportioned fowl, unless the comb is too heavy, and the hens are full behind, as we should expect from such prolific layers. Weight: males, 6 to 7 pounds; females, 5 to 6 pounds. Señor Salvador Castello says,* in comparing the Castilian with the Minorca, 'English breeders have taken special pains to obtain birds with large combs, in some cases immensely spread out; they have made the shape more slender, and increased the brilliancy of the plumage; they have obtained greater bulk and weight, and have, in fact, created a type quite distinct from the Castilians of this country.'

Varieties.—The two colours are the Blacks and the Whites, for, strange to say, a Mottled Minorca has not been produced, an indication of the prepotency of the black pigment in the plumage. Such a variation would be very welcome.

BLACK (Fig. 39).—The plumage is of a rich, glossy, dead black, without the metallic appearance seen in some breeds; the beak is dark horn in colour, and the eye is dark; legs and feet are very dark slate; earlobes are preferred if white, but, for reasons already stated, this is a point of no moment for practical purposes, and they are better if small in size.

WHITE.—Very few are now to be seen, and we believe that they are less hardy than the Blacks. Many have the appearance of almost albinoism in the white plumage, which gives them a washed-out look. They should be glossy white, with a white beak, and the legs and feet are pinky-white; the earlobe is white, but the fowl would look better if, like the comb, face, and wattles, this was blood-red.

ANDALUSIAN.

NOMENCLATURE: *English*, Andalusian; *French*, Andalouse; *German*, *Dutch*, Andalusier; *Danish*, Andalüsiere; *Italian*, Andalusa bleu; *Spanish*, Andaluza; *Hungarian*, Andalusiai.
VARIETY: One.
CLASSIFICATION: Non-sitting.
COLOUR OF FLESH AND SKIN: Greyish-white.
COLOUR OF LEGS AND FEET: Dark slate.
COLOUR OF EGG-SHELLS: White.

During our visit to Spain we saw throughout Castile and the northern provinces many birds which differed

* *Fanciers' Gazette*, March 19, 1897, p. 209.

* 'Avicultura,' par Salvador Castello (Barcelona, 1899), p. 113.

considerably from the Black Castilian in colour of plumage. These included speckled and blue, the latter in most respects very similar to what we know as the Andalusian. But such variations are common in every land where black fowls are to be met with. Unfortunately, our peregrinations did not extend into Andalusia itself. Mr. Harrison Weir paid a visit to Southern Spain in 1879,* and when there made every inquiry respecting the blue variety round about Cadiz, Gibraltar, Algesiras, Malaga, etc.; but although I visited several places where choice fowls were kept, the so-called Andalusian appeared to be quite unknown.' But upon this point our observations are confirmed by Don Salvador Castello, who says:† 'It is quite possible that this breed came originally from Spain, for it is found throughout our country.' We do not, however, think that it has any special connection with Andalusia. That was a name probably given because it was imported into England from the port of Cadiz.

Origin.—This question does not present many difficulties. Given black fowls, from which whites would come as occasional sports, the crossing of these two colours would give blue or slate coloured plumage. There is plenty of evidence in support of that fact. It is well known that in Devon and Cornwall fowls with this peculiar cast of plumage were to be found before any Andalusians were imported, bred from Minorcas. Some years ago a writer, signing himself 'Devonian,'‡ said: 'In the summer of 1849 I fell in love with one of a brood of Black Minorca chickens—one I fancied the owner called a "Blue Minorca." It was agreed that I should have this one when old enough to be taken away, and then my poultry-keeping began with a Blue Minorca pullet (afterwards I found she was entitled to be called Andalusian).'

A writer in the *Cottage Gardener*§ says that he had made 'a cross between a White Andalusian (? White Spanish) cock and a Black Spanish; the progeny are all blue—the colour of a blue pigeon.' And another writer in the same journal says:‖ 'The Black Minorca will often sport a white chick, and a blue one also, however carefully bred.' Ferguson says¶ that 'in Holland, previous to the naturalization of the Spanish fowl, a domesticated bird, in colour a dun or bluish-slate, though much inferior to the Spanish, prevailed.' This writer has a very novel suggestion with regard to the origin of the Andalusian, stating that it was introduced into Spain from the West Indies, and that** 'the Manx is the original domesticated species of Spain. We have seen but one specimen of the class, and believe it to be extinct. They are of a bluish-grey cast of colour, and do not present a white face, but possess white earlobes, which are rather full compared to other varieties of domestic fowl, although less than in the Black Spanish. They have large combs and wattles; are somewhat short about the leg, both in shank and thigh-joint.'

We have not been able to trace any other reference to this Manx fowl, but if the statement is correct that it was the common fowl of Spain centuries ago (as the supposed importation from the West Indies is clearly untrustworthy), and that upon it was engrafted what is termed the Castilian, either brought from the East or by the Moors from Africa, we should have an explanation of the special variations of Spanish fowls. It is clear from many references which could be given that grey, grey-speckled, blue, and slaty-plumaged birds have been common in Britain, and under such conditions the production of the present-day Andalusian would be comparatively easy, for, as Mr. R. T. Thornton has well said:* 'Take away the white face, and the Spanish would become to all intents and purposes a good Minorca; go a step further, and eliminate the black from the feathers except round the edges, put blue in the place of black, and you would produce a good imitation of the Andalusian'—nay, the Andalusian itself. It is interesting to note that at one time an attempt was made to call the Minorca by the term Andalusian, but the former retained its rightful cognomen. Mr. Lewis Wright says† that the earlier imported Andalusians had a small comb, which in the hens stood upright, and that these were crossed with Spanish, resulting in enlargement of the comb. Later the Minorca was used, thus counteracting the tendency to white on the face which was so much seen about twenty years ago.

History.—The first recorded importation took place in 1851, when a number of birds were bought from a ship's captain at Portsmouth. White fowls had been known some years previously. 'Mr. John Taylor, who has obtained many prizes for his Andalusians, found great difficulty in procuring pure specimens of them in Spain, where they are extremely scarce. Out of twelve of the best that could be obtained for him and brought to England, there were but three possessing the true colours and indications of pure blood. By uniting these with his original stock a vigorous and improved progeny was raised.'‡ At first these birds were called Blue Spanish or Blue Minorca, but the term Andalusian was speedily adopted and retained. Since that time a great change has taken place in the type of fowl, and it would appear that the earlier specimens

* 'Our Poultry,' by Harrison Weir, F.R.H.S. (London, 1902), p. 492.
† 'Avicultura,' par Salvador Castello (Barcelona, 1899), p. 118.
‡ *Poultry*, October 22, 1886, p. 523.
§ November 22, 1859, p. 119.
‖ *Cottage Gardener*, January 3, 1860, p. 218.
¶ 'Rare and Prize Poultry,' by G. Ferguson (London, 1854), p. 66.
** *Ibid.*, p. 69.

* *Stockkeeper*, April 19, 1889, p. 230.
† 'New Book of Poultry,' by Lewis Wright (London, 1902), p. 399.
‡ 'Domestic Poultry,' by Martin Doyle (London, 1854), pp. 57-58.

were very gamey in type, so much so that many believed they were a sort of Blue Game fowl. The modern Andalusian has decidedly more reach than the Minorca, and in respect to length of neck and legs follows the Black Spanish, but the Minorca influence is seen in the compact shape of body, as well as in the comb. Formerly the latter was not so full at the back, standing up more from the head, in which respect it differed from that of the Minorca, and it was also finer in texture. But now we have the rounder, heavier comb, though not so thick and large. A further change is that the birds first imported were not laced either in cocks or hens, or only to a very slight extent, but that is regarded as a *sine quâ non* in a pure specimen. In spite of their good qualities, noted below, Andalusians have not become popular in any country, and they are chiefly bred for exhibition purposes.

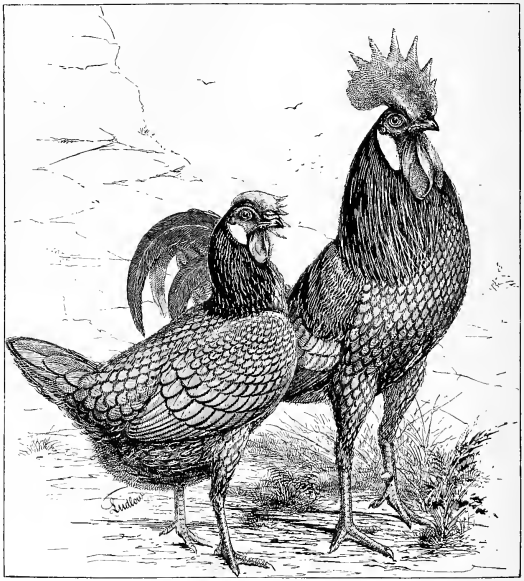


FIG. 40.—ANDALUSIANS.

Economic Qualities.—The Andalusian, like Black Spanish and Minorcas, is remarkable as an egg-producer, both as to the size and number of eggs laid. In fact, it is claimed that they excel either of the breeds named. Messrs. Abbot Bros., the well-known breeders, record as to their merits in the following eulogistic terms:* 'We have kept them entirely for egg production, and found them such wonderful egg-producers, of both size and quality, that we discarded the common farmyard fowl kept before. We took six pullets, hatched in April, and mated them with a cockerel on August 1, and kept them until July 31 following, and the result of this experiment was an average of 234½, or a total of 1,407 eggs. They were kept under favourable conditions,—almost unlimited grass run, with plenty of shade and shelter.'

* 'The Andalusian Fowl,' by L. C. Verrey (London, 1893), p. 15.

The eggs are large, frequently reaching 30 ounces the dozen. These birds are good foragers, and yet bear confinement very well—in fact, the majority are so kept—but they are rather prone to feather-eating and comb-pecking. What has been stated regarding the Minorca applies equally to the Andalusian, namely, that they are best suited to a kindly soil and sheltered positions. Like the other Spanish varieties, they are scanty and slow in feathering, and consequently unable to stand cold winds. They make moderate table fowls, except for the production of *petits poussins*, or 'milk chickens,' for which they are very suitable, as they grow quickly.

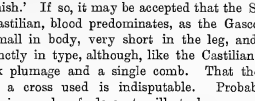
Description (Fig. 40).—The differences between the Minorca and Andalusian are that the latter is not quite so long in body, which tapers rather more towards the tail; the wings are longer, and carried close to the body; the neck and legs also are somewhat longer, giving the appearance of a more 'reachy' fowl; the comb is of a good size, upright in the male and falling over in the hen, evenly serrated and fine in texture, the wattles being long and broad; face bright red, free from white; earlobe moderate size, carried close to the face, and white; the head, hackle, back, and saddle in the cock are bright, clear black, as are the shoulders, wing-bows, and tail; the breast and thighs have a ground colour of silver-blue, with black edging or lacing, which is sought for in the hen, except that the head is black and the neck-hackle has black tips; beak dark slate, and legs also, or leaden blue. Many of the birds are much lighter in colour, and others almost black, for the Andalusian is a very uncertain breeder. Weight: males, 6 to 7 pounds; females, 4½ to 5½ pounds.

BARBEZIEUX.

Nomenclature: In all countries, Barbezieux.
Variety: One.
Classification: General Purpose.
Colour of Flesh and Skin: White.
Colour of Legs and Feet: Dark grey.
Colour of Egg-shells: White.

Although this race is generally included among the French breeds, as it is chiefly found in the Charente, the department to the north and north-west of Bordeaux, for reasons given below we are compelled to include it among the Spanish breeds. In fact, it has been called the French Minorca.

Origin.—It is easy to conceive that the Castilian breed would cross the Pyrenees into the South-West of France, but we have no direct evidence of such migration having taken place. The appearance of the Barbezieux is, however, sufficient warrant for that assumption. Evidently that is the opinion of French breeders, for M. E. Lemoine says:* 'The race was created in the Charente, perhaps the result of a cross probably it is descended from the Gascon fowl and the Spanish.' If so, it may be accepted that the Spanish, or Castilian, blood predominates, as the Gascon fowl is small in body, very short in the leg, and differs distinctly in type, although, like the Castilian, it has black plumage and a single comb. That there has been a cross used is indisputable. Probably the following scale of descent will truly represent its origin:



History.—So far as we have been able to learn by personal inquiries in the Charente, the Barbezieux has been bred there for a very long time, but we were unable to obtain information as to actual importations from Spain. Throughout the Medoc, and from Bordeaux to the Spanish border, fowls of this class prevail, although they vary considerably in colour of plumage. In the Charente, however, there is greater uniformity, due to more careful selection and breeding. The changes to be noted from the Castilian, chiefly as to quality of flesh and greater development of maternal instinct, may be attributed to the rich soil of the district in which they are kept, and to breeding.

Economic Qualities.—'The Barbezieux hen is a good layer; she produces at least 150 eggs per annum, each egg weighing nearly 2¼ ounces. She is also a good sitter and mother, but she is very lively, and does not like being disturbed. She looks well after her progeny when she sits in a place chosen by herself, but does not care for confinement. The rearing of the chickens is easy, and they develop in a short time. They grow quickly, but must be supplied with very nutritious food from an early age.'* The flesh is delicate, fine, and white, and for table purposes they are regarded with great favour. The muscle is not so abundant as on many other races of fowls, and that is to be expected from the ancestry, but it is very fine in quality.

Description.—The Barbezieux is a large, long-bodied fowl, rather long in the neck and leg, following closely in shape and carriage the Castilian, in that it is not so full in front as the Minorca; it has a long head, surmounted by a single comb, upright in the male, falling slightly over in the hen, well serrated, but not very large, and fine in texture; face red, as are the comb and wattles; earlobes white; the legs are strong, and, with the feet, are of a very dark grey colour.

* 'La Basse-Cour Pratique,' par E. Lemoine (Paris, 1902), p. 77.

* 'La Basse-Cour Pratique,' par E. Lemoine (Paris, 1902), p. 78.

Variety.—Only one, that already described, is recognised, although there are many speckled birds in the district, evidently of a similar class.

PRAT.

NOMENCLATURE: Prat.
VARIETIES: Uncertain.
CLASSIFICATION: General Purpose.
COLOUR OF FLESH AND SKIN: White.
COLOUR OF LEGS AND FEET: White, or light slate.
COLOUR OF EGG-SHELLS: Pinkish-white.

During a visit to Spain in 1902 we met with a variety called the Prat, coming from a district of Catalonia, near to Barcelona, which was distinctly the best class of fowl in that country for table purposes. We had no opportunity, however, of studying it in its native district.

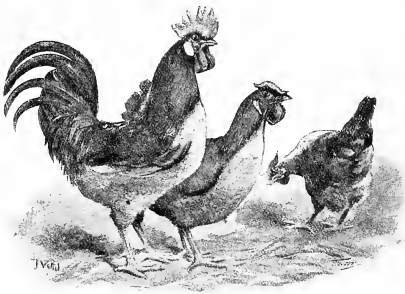


FIG. 41.—PRAT FOWLS.
(*From 'Avicultura.'*)

Origin.—Don Salvador Castello thus accounts for it:* 'Twenty years ago the Cochin China breed, which commanded such attention abroad on account of its exceptional size—larger than had been seen before, especially in hens, began to be largely introduced into the Peninsula; and it is supposed that it must have crossed with the old indigenous breed, then still good, which was to be found in greater perfection in the Prat than in other districts of Catalonia, and where it was not subjected to so much attention or so much crossing. The result was a hybrid of greater size than the ordinary, usually tawny in colour, with feathered legs, which had never been a distinctive or dominant characteristic of the Southern breeds. Then, by a law of Nature, the above-mentioned characteristics began to disappear in order to return to the type of the hardiest breed, namely, the Catalan, whilst the great size alone remained, being preserved by selection on the large farms in the Prat. In this way we can explain the existence in Catalonia of a breed much larger than is usually found in our Peninsula, and the disappearance of the other characteristics of the breed which caused this increase in size.'

History.—As the breed has yet to prove its value and to win general acceptance, it has no history to record.

Economic Qualities.—'The hen of the Prat breed unites the quality of a pretty good egg-producer with that of a perfect mother, which makes her of great value on a farm. She lays between 100 and 130 eggs annually. Although she is not one of the greatest egg-producers, this is compensated for by the quality, for the eggs weigh on an average 2·4 ounces; they are very large and white, and have a reddish yolk, which makes them all the more valuable. The chicks rear easily; they are rather bare in the earliest stages, but at three months are fully feathered and very strong. The flesh of the Prat breed is the best among all the Spanish breeds. It is white in colour, takes fattening well; the cockerels and pullets are very forward in their growth, and may be ready for eating in four or five months, since they put on the proper amount of flesh at this early period. In the year, or even at eight months, the Prat produces really notable specimens both for size and weight, and on this score need bear no grudge, as has been said, against foreign breeds, which in this respect enjoy greater celebrity. There are, perhaps, certain limitations to be considered in counting the Prat among the pure breeds, for its colour has not yet become a constant factor; but, still, the characteristics and general lines of the breed are sufficiently defined to admit of its being considered a pure race.'

Description (Fig. 41).—We quote from Don Salvador Castello:* 'A good size; weight, 6½ to 9 pounds in cocks of a year old, and 5½ to 7½ pounds in adult hens. The breed possesses a single comb, erect in the cock,

* 'Avicultura,' par Salvador Castello (Barcelona, 1899), pp. 106-107.

* 'Avicultura,' par Salvador Castello (Barcelona, 1899). pp. 105-106.

and rather drooping in the hen; colour buff, plain or golden breast, greenish in the cock, and tawny or partridge in the hen. The cock often has a showy red and metallic sheen, red face, white earlobes; the hackles and sickles very prominent in the cock; the tail held high and erect, generally tipped with black in the hens. The legs are free from feathers, are white or slate-coloured and pinkish, and at the base darkish horn-coloured. The hen has a deep body; the posterior appears very large owing to the feathers. The cock is handsome and large. The hen carries much flesh, and lays very large pinkish-white eggs. The preceding is the most usual variety in the Prat, a district not many miles distant from Barcelona, whence it derives its name. But there are found a considerable number of varieties differing from the description given, but never black or white; some have slightly feathered legs. These varieties, however, are seldom much appreciated, seeing that they recall the defects of one or other of the breeds that contributed to form the Catalana del Prat.'

CHAPTER VIII

BELGIAN RACES OF FOWLS

Campine	Flemish Cuckoo
Braekel	Herve
Ardenne	Huttegem
Malines	Brabant
Bruges	Antwerp Brahma

THERE is no part of Europe where the peasantry have shown greater skill in the production of valuable races of animals and birds, or have given more intelligent attention to their improvement upon practical lines, than in the Low Countries, more especially—as a result of favourable conditions—in what is now known as Belgium. The inhabitants of that land are essentially practical. Their industry and thrift are proverbial. The æsthetic appeals to them to a very limited degree, or in other ways than found among neighbouring peoples. Almost every foot of soil under the control of the peasants is utilized by them profitably. The land is limited in extent, and is very thickly populated, so that it is only by intensity of cultivation that so large a production is attained. We cannot forget that among small races of birds the Homing pigeon and the Belgian canary, as well as several races of fowls, originated in that country, where, more than in any with which we are familiar, domesticated animals and birds have been employed to maintain the balance of Nature between animal and plant life. In all respects the Belgian peasants equal the French for their industry, skill, and attention to detail, and we feel that in respect to knowledge of the art of breeding they may be given the first place among the nations of Europe. The amount of knowledge they possess is remarkable, considering their lack of education and home-staying proclivities.

They are essentially self-contained, reserved, even suspicious. Our friend M. Louis Vander Snickt states that it is almost impossible to induce them to reveal this knowledge, which takes the form of tradition handed down from father to son for generations. If he is unable to obtain it, who can? His explanation is that during the days of the Spanish dominion, more than 300 years ago, when the struggle for freedom extended over eighty years, they had enemies on every hand and a traitor in every stranger, so that they became reserved and suspicious. The instinct of self-preservation was so developed as to become part of their character, and yet remains. We have had evidence of this when travelling through the rural districts of Belgium.

From what has been stated it might be expected that the races of poultry met with in Belgium would primarily possess economic qualities, and that is found to be the case. Although in later years breeding for external character has grown to a considerable extent, as shown by the large poultry exhibitions held there, this branch is confined to amateurs, and has not been taken up by farmers. As in France, the line of separation between fanciers and practical poultry-breeders is more sharply defined than is the case in Britain, America, or any other country with which we are acquainted. It is strange, however, that the Belgian races have not found acceptance to any great extent outside their own land, although, as we have already seen, the Campine, or a similar breed met with in Holland, was the basis upon which our Pencilled Hamburghs were made, but modified considerably. As to the Dutch breed common in Friesland, more is said below.

CAMPINE.

NOMENCLATURE: In all countries, Campine; except *German*, Campiner Mörven; *Danish*, Kampinere; *Hungarian*, Kampine.
VARIETIES: Gold, Silver.
CLASSIFICATION: Non-sitting.
COLOUR OF FLESH AND SKIN: Greyish-white.
COLOUR OF LEGS AND FEET: Slate-blue.
COLOUR OF EGG-SHELLS: White.

Origin.—It is generally admitted that the race we now know as the Campine is of great antiquity,

having been bred in the Low Countries for centuries. One authority says:* 'They exactly answer to the *G. turcica*, or Turkish fowl of Old Androvandus'; whilst another states† that 'by tradition it dates as far back as 1206.' It is probable that fowls of this type were common over a great part of Europe, and, as our poultry came from the East to the West, the suggestion as to the *G. turcica* has much to be said in its favour. Such divergences of type as are met with even in Belgium, where both rose and single combed fowls of Campine character are found, are to be expected in the absence of fixed standards, and where the Antwerp and Hasselt, in the provinces of Antwerp, and Limburg, a district where activity of habit is essential to any breed, as the amount of natural food available is comparatively small. Under such conditions small size of body would be expected. At one period the Campine was almost universal, but of late years, to meet the demand for table poultry, another and larger race has been introduced—the Malines.

Our first personal knowledge of the Campine was in 1885, during a visit to Belgium, but they did not offer any special attraction, appearing very inferior to Hamburghs, and although reputed to be splendid layers,

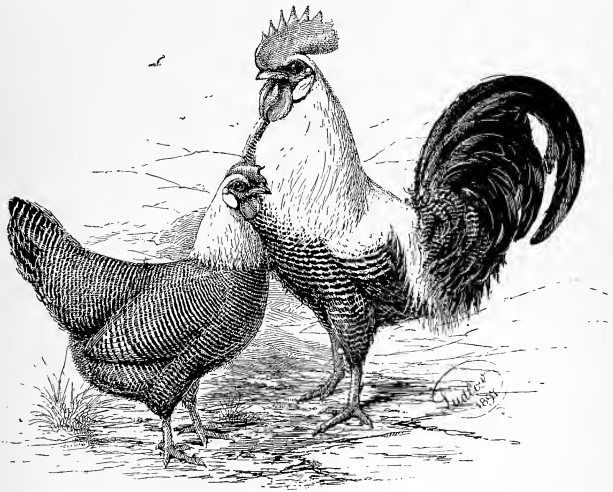


FIG. 42.—SILVER CAMPINES.

economic qualities are the primary object. In this instance we have a breed which can claim purity of race for a very long period—one of the few to be met with. Practically, that is all we know of it.

History.—The name given to the race is derived from the fact that it is so largely bred in the Campine country—that is, the dry, sandy plain lying between the eggs were small, very much below the requirements of our markets. In 1897, during a further tour in the Low Countries, we were surprised to find that by careful selection the size of egg had been greatly increased, and that greater attention had been given to purity of type. Our notes published at that time led English breeders to import Campines, and the breed has attained a fair measure of success, but chiefly in the hands of exhibitors. Our interest in the breed is by reason of its prolificacy, and we regret to see that the merely external characters are unduly

* 'New Book of Poultry,' by Lewis Wright (London, 1902), p. 465.

† 'Our Poultry,' by Harrison Weir, F.R.H.S. (London, 1902), p. 588.

exalted. In fact, it is being bred as a 'fancy' fowl, which is most undesirable. Already changes can be noted which are unnatural, although the testimony as to its wonderful egg-laying is universal. A further point to be kept in view is that many so-called Campines in this country are really Braekels, whilst in others the Hamburgh influence is evident.

Economic Qualities.—The Campine is hardy under favourable conditions, precocious, a small eater, and an excellent forager, but it does not easily adapt itself to confinement, more especially when it has little to do in the way of scratching for food. The chickens are very rapid growers, and at an early age carry a considerable quantity of flesh, which is wonderfully delicate. For this reason they are largely used in Belgium as milk chickens (*poulets de lait*). But, like all the non-sitting races of that type, with increased age the flesh becomes hard and is fibrous. It is as an egg-producer that the breed excels, and high averages have been secured, certainly well over 200 per annum. As already mentioned, the eggs are of a good size, in the case of adult hens weighing over 2 ounces each. We believe that these birds are more successful upon lighter lands than on heavy soils, which is to be expected from their habitat in Belgium.

Description.—The body of a Campine, whilst small, is long, with a full, round, breast, as in the Hamburgh, but it is neither wide or deep; the principal point of difference, except plumage markings, is the comb, which is single in both sexes, large, and falling over in the hen, evenly but not deeply serrated, and with the wattles and face of a bright red; earlobes are bluish-white, and inclined to almond shape, but small in size; legs and feet dark slate-blue. Weight: males, $4\frac{1}{2}$ to 5 pounds; females, $3\frac{1}{2}$ to 4 pounds. The carriage of the Campine is scarcely so proud or graceful as that of the Hamburgh, and the markings of the plumage less regular and are coarser.

Varieties.—As in the Pencilled Hamburgh, there are two varieties, the Gold and the Silver. In each of these the markings are the same. The neck-hackle in both sexes and the saddle-hackle in cocks is of the ground colours named below, whilst the rest of the body has broad bars of black, not so fine as in Pencilled Hamburghs, and less regular. The sickles in the cocks are black, with a bar of the ground colour.

GOLD.—The ground colour in this variety is of a golden yellow, but not brilliant—in fact, rather dull.

SILVER (Fig. 42).—Here the ground colour is silvery-white, but tending more to white.

BRAEKEL.

NOMENCLATURE: In all countries, Braekel.
VARIETIES: Gold, Silver, Black-headed, White, Chamois, Black, Blue.
CLASSIFICATION: Non-sitting.
COLOUR OF FLESH AND SKIN: Greyish-white.
COLOUR OF LEGS AND FEET: Slate-blue.
COLOUR OF EGG-SHELLS: White.

Origin.—What has been already said regarding the Campine is equally true of the Braekel, which, from the evidence obtainable, is descended from the same stock, such variations as are noted below being due to the different conditions under which they have been bred. The name was probably given to them because they were bred extensively in the neighbourhood of Nederbraekel, in Flanders. M. Vander Snickt suggests* that these Belgian breeds, together with others found in Germany, Italy, France, and Spain, came from the East, by way of Russia; but, whilst it is undoubtedly true that the races of poultry met with in Russia migrated there from Asia, as did the European breeds, we have no evidence in support of the view that it was by way of Russia, and think the course of travel was further south. Whether such modifications as exist between the Campine and the Braekel are due to Asiatic blood, which has increased the size of body, cannot be decided, but that is not the view of M. Vander Snickt, who regards both breeds as originally the same, and, in a letter to the writer says: 'We call Campines the Braekels that became smaller on the arid sands of La Campine, where, as you know, it is so warm.' The effect of soil and climate in the evolution of races is very great. As the same careful authority says:† 'The Campine remains small upon the poor Campine sand, upon which it wanders to seek food. It deviates into the Braekel—that is to say, becomes larger—upon the rich Flemish soil, where the farmers provide the birds with succulent and abundant nourishment.' The two breeds are fed on the same food, he explains, but the Braekel grows larger among the rich crops, and the Campine wanders freely upon the dry soil which exclusively supports it. Nearly all the French authorities regard these breeds as the same, and in point of origin that is true, but they are now sufficiently apart to warrant separate classification.

History.—The Braekel is chiefly met with in the West of Belgium—that is, the province of Flanders—where it is extensively bred, and has been kept for a long period. It is also met with in Northern France. Until recent years it was scarcely known outside that area, but regarded as a common fowl of no special value. Fortune favoured the Campine, in that it was more within the range of observation, and bred near to Brussels, Malines, and Antwerp. Hence it was taken up by amateurs, written about by students of

* *Chasse et Pêche*, February 26, 1899, p. 348.
† *Ibid.*, August 21, 1898, p. 683.

poultry culture, and obtained classification at exhibitions. We had paid several visits to Belgium, seeing the Campine each time, but not a Braekel until 1897.

Had our friend M. Vander Snickt, in the last-named

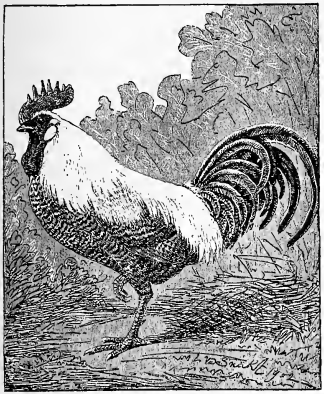


Fig. 43.—Silver Braekel Cock.

year, conducted Mr. A. F. Hunter (then editor of *Farm Poultry*, Boston, United States of America) and the writer to the Braekel country, instead of that of the Campine, probably the former would have been introduced into Britain rather than the latter. Since that time we have had Campines, but many bearing that name are really Braekels. Our first importation of the Braekel was in 1898; but whilst we found them splendid layers, they did not prove to be as vigorous as could be desired.

Economic Qualities.—The following particulars are taken from *Chasse et Pêche*:* 'Its large eggs are so much sought for upon the markets, and the chickens bought for farms, that attention has been attracted to this fine old race. All the farmers, large and small, breed them in preference to any other. The Braekel has, further, the speciality of producing the finest *poulets de grains* in the world. This precocity is not due to chance: it has been bred for during a long period. The chicken is no sooner out of the shell than the comb is developed; at three weeks the cockerels commence to crow; at six weeks they begin to drive about the hens. This unheard-of precocity is needed. . . . The Braekel chicken is as much developed at six weeks as a Coucou de Malines at six months. It can be killed as an ordinary *poulets de grains;* it can be fed in eight days, in order to give it the appearance of a fat fowl, to which it is inferior in size, but superior in quality.' Like all the non-sitting races, at a greater age it loses flesh qualities. The breed is fairly hardy, and is remarkably prolific as a layer, which latter quality may be attributed to its great activity, but also to the early maturity secured by breeding. In this direction the sport of cock-crowing has contributed greatly. Pullets have been known to begin laying at three months and three days old, and, as mentioned above, the eggs are large, those produced by adult hens weighing about seven to the pound.

* July 31, 1898, p. 634.

Description.—The body of the Braekel is large and square, following the Dorking shape, but it is never found with white legs or five toes; the breast is prominent and carried well forward; the neck is full and of medium length; the head is large and surmounted by a tall, long, single comb, carried well before and behind, and with several not very deep indentations. In the cock it is upright, but in the hen falls over; the wattles are medium in size; earlobes large and bluish-white; eye should be black; the tail is full, with large sickles in the cock; legs medium in length; feet with four toes, and slaty-blue, with white toenails; the carriage is alert and active. Weight: males, 5 to 7 pounds; females, 4½ to 6 pounds.

Varieties.—The leading varieties are the *Gold* and the *Silver* (Figs. 43 and 44), in both of which the mark-

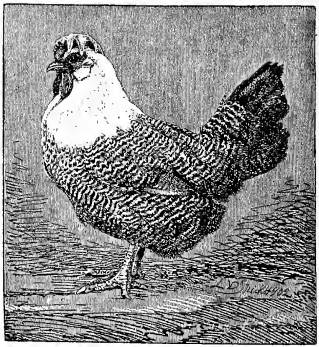


Fig. 44.—Silver Braekel Hen.

ings are coarser and broader than in the Campine, and are less regular. They need no other description, except that in the Silvers the ground colour is creamy-white, not silvery-white. Other than this the description given

of the Campine will apply. *Black* and *Blue* Braekels are officially recognised in Belgium.

Pure *White* Braekels, as might be expected, are sometimes found, and will probably be fixed. These are due to the failure of black pigment in the Silvers. On some farms in Belgium all the animals and birds are white, but the White Braekels keep their black eyes, blue bill and legs.

Specimens with *Chamois* plumage have been bred successfully, obtained by crossing the Gold and the White. In these there remains the yellow ground colour, but instead of black markings these are white. They have evidently resulted from natural influences, as they were not produced by selection. This is a very pleasing variety, but difficult to obtain.

Another variety is called *Black-headed*, in which the head and neck feathers are black or very dark grey. These are stated to be among the most vigorous and precocious of all the Braekels. Upon this interesting race M. Louis Vander Snickt writes:

'The Black-headed Braekel was derived, I think, from a cross with the Owl-bearded Dutch.* The beard has been bred out, but the characteristic marking returns by reversion. The Black-headed cockerels are very precocious, and assert their position very early. As soon as the ornamental feathers are grown, the Black-headed cock is the same as the barred, except that the tuft of hair on his ears remains grey, and that he is marked on the breast with round marks or spangles, as in the Owl-bearded and the Hamburgh. The three varieties and others are continually mixed, when separately bred for the show-pen, to secure the practical qualities and vigour of constitution.'

Of the Braekel there is a short-legged variety, called the 'Braekel Courtes Pattes,' probably due to a cross with the Courtes Pattes of France. Respecting this variety, we again quote from M. Vander Snickt:

'There is no need for making short-legged Campines, as they must wander at liberty; but in the land of Braekels, where population is very dense, the legs are shortened in order to prevent them scratching in the neighbouring gardens. For the same reason the feet of these creepers are almost like those of ducks. Specimens of the race have partly lost that character, and become smaller, and that is why they are sometimes called Campine Courtes Pattes or Creepers.'

ARDENNE.

NOMENCLATURE: Ardenne or Ardennaise.
VARIETY: One.
CLASSIFICATION: General Purpose.
COLOUR OF FLESH AND SKIN: White.
COLOUR OF LEGS AND FEET: Blue-grey.
COLOUR OF EGG-SHELLS: White.

Origin.—This breed is distributed throughout the Ardennes, on the southern borders of Belgium. We have no information as to its origin, but from its appearance and wild nature we should suppose that it has descended from a race given full liberty, crossed with one or other type of Game fowl.

History.—Here again we are without information, but the breed is kept to a considerable extent in the well-wooded Ardennaise, where the somewhat sparse population would be able to breed it in a natural manner.

Economic Qualities.—The Ardennaise fowl is very hardy when kept under natural conditions, but does not bear confinement well. It is an excellent forager, wandering far in search of nourishment. The flesh is abundant, the skin delicate, and it makes a good table fowl if hung long enough to soften. The Ardennaise poultry, when pure, has the reputation of very fine flavour, as have the hams produced in that district. The hens are fair layers of medium-sized eggs. The breed has adapted itself to the cold, rocky Ardennaise situation, 1,200 to 1,500 feet above the sea-level.

Description.—The breed is of medium size, with compact body, flat in front as in the Game; the neck short and thick; head long and fine, but with a short, strong beak; comb single, medium in size, regularly indented; wattles long and round; eye red; face covered with fine feathers; wings large and carried low; tail full, with large sickles; legs medium in length, fine in bone, and five toes on feet; the plumage in the cocks is very similar to our Black-red Game; the tail feathers are so close that they appear almost as if there were but one feather; the hens as a rule are very dark in plumage; very active and nervous, as shown when approached by a stranger. Weight: males, 5 to 6½ pounds; females, 4 to 5 pounds.

M. Vander Snickt informs us that in the Liége country is a common breed called Rumpless (*la poule sans queue*), which much resembles the Ardennaise, embracing all possible colours. It has black eyes, with grey or red earlobes. These hens, kept on isolated farms, are also called *poules des haies* (hedge fowls). They are very good layers, hardy, but shy, and escape easily where there are many foxes.

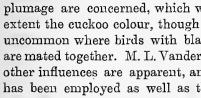
MALINES.

NOMENCLATURE: *English*, *French*, Malines; *German*, *Danish*, Mechelner; *Dutch*, Mechelsche; *Spanish*, Malines.
VARIETIES: Coucou, White.
CLASSIFICATION: General Purpose.
COLOUR OF FLESH AND SKIN: Cream.
COLOUR OF LEGS AND FEET: Rosy-white.
COLOUR OF EGG-SHELLS: Pale brown.

Origin.—It is generally admitted that the Malines fowl is due to a cross between the Antwerp Brahma and the common fowl of the country, which, as we have already seen, is now the Campine, but at one time was

* See chapter on Dutch Races of Fowls.

the Flemish Cuckoo. From such evidence as we have been able to obtain, it is more than probable that twenty years ago and upwards, when this cross was made, there had not been such careful selection as at present, and that the fowl of the country partook more of a Braekel character, so far as markings on the plumage are concerned, which would explain to some extent the cuckoo colour, though that is by no means uncommon where birds with black and white feathers are mated together. M. L. Vander Snickt suggests* that other influences are apparent, and that the Langshan has been employed as well as the Brahma. This is supported to some extent by the tendency to black in the plumage and by the single comb. It is probable, however, that the Coucou de Flandre has also been used, but upon that point direct evidence is wanting. We may accept the following table of descent as approximately correct :



The first type was the Cuckoo, from which the Whites are sports.

History.—The breed appears to have been existing in one form for centuries, but the modern type was introduced by M. de Winter from 1850 to 1860 in the Malines district of Belgium—that is, the province of Brabant, to the north-east of the city of Brussels—and has extended to the borders of the Escaut, near Termonde. During a visit to these districts we found it almost as popular as with the Campine, more especially where the production of table poultry is specialized. It is with a view to meeting the demand for large-bodied, well-fleshed birds that it is raised, and the birds which are known as *poulets* and *poulardes de Bruxelles* are entirely Malines. This race has not extended much beyond the country of its origin, but where tried has proved very useful for utility purposes.

Economic Qualities.—In spite of the fact that the Malines fowl is bred primarily for its table qualities, we are compelled to include it in the General Purpose class, by reason of the fact that it is heavy in bone, and that it is consequently not a rapid grower, though superior in this respect to most of the races embraced in the same category. The flesh produced, which is creamy-white, is also more upon the thighs than in the purely table breeds, but it is good in quality, and the fowls fatten rapidly, due to their quiet, indolent nature. For table purposes these birds must be killed before they are six months old, and they are said to grow at the rate of 2¼ pounds per month after the first few weeks.

* *Chasse et Pêche*, August 7, 1898, p. 652.

It is a very hardy fowl, as might be anticipated by its origin, and the chickens can be raised with very little trouble. The hens are good sitters and mothers, commence to sit after they have laid twenty eggs, but, like the Brahma, they are rather clumsy. The hen is an ordinary layer, giving eggs which vary considerably in size, but often small in comparison with the size of hen producing them, or chickens emerging therefrom, as is usual with all the Asiatic breeds; the eggs are nicely tinted, and are usually very round. These birds, as a rule, are satisfactory winter layers.

Description.—The Malines fowl is essentially of the Asiatic type, following more closely the shape and feathering of those races, such as the Brahma and Cochin, than does the Plymouth Rock. It is large in body, and we have seen an adult cock weighing nearly 13 pounds, but that was exceptional. The body is long, deep and massive, with a prominent breast and straight keel; the neck is short, well curved, and thickly covered with feathers; the head strong, well proportioned to the size of the bird, with a reddish-white beak pencilled with black; eye orange; comb single, small in size, standing upright, and partaking of the Langshan character, not deeply serrated; wattles long and, like the comb and face, red, as are the earlobes; the wings are short, small, and carried close to the body; thighs and shanks are long, the former covered with a soft cushion, the latter and the feet are feathered on the outer side, but should not be heavily covered; the feet are strong and the toes four in number; the legs and feet pinky-white in colour; in the cock the tail sickles are short. Weight: males, 9 to 11½ pounds; females, 8 to 10 pounds. In temperament these birds are very quiet, and do not wander much.

Varieties.—The two leading varieties are those named below, but, as might be anticipated from a cross of this kind, there are many variations, black, yellow, etc., some of which may by selection become fixed, though that is not the case as yet. Blacks are well spoken of when found, as they are vigorous and hardy. We have seen birds with triple combs, thus following closely the Brahma ancestry, but it would be undesirable to perpetuate varieties only differing to that extent.

Cuckoo.—In colour the plumage throughout is what we call cuckoo—that is, the ground is blue-grey, each feather marked with bars of dark blue, shading into pale blue. The clearer the distinction between these the better. The neck-hackle is more even than the body plumage. Sometimes the tendency is in the direction of greater density of colour. That, however, is a mistake, and the paler ground colour should predominate, but show the markings clearly, giving the appearance of a light-coloured fowl.

White.—In these the feathers are entirely white,

and they look very pretty indeed. The number of Whites is much smaller than of Cuckoos. They are preferred by fanciers, but the fatteners do not like them, as they do not feed up well. The latter choose for preference two-coloured birds, as they are regarded as hardier than the self-coloured.

BRUGES, OR COMBATTANT DU NORD.

NOMENCLATURE: *English*, *Danish*, *Hungarian*, Bruges; *French*, Combattant de Bruges and Combattant du Nord; *German*, Belgische Kaampfer; *Dutch*, Brugsche; *Spanish*, Brujas.
VARIETIES: Red, Black, White, Blue.
CLASSIFICATION: Table.
COLOUR OF FLESH AND SKIN: White.
COLOUR OF LEGS AND FEET: Leaden.
COLOUR OF EGG-SHELLS: Light tint.

Origin.—Fowls of the type known as Bruges are common in the Netherlands and in the North of France, but there is a great amount of uncertainty as to their origin. It is claimed by some authorities that the race has been known for centuries, and is indigenous to the districts named, whilst others state that it is due to a cross between the Malay and fighting Game fowl formerly known all over Europe. That it has many indications of Malay influence cannot be questioned, but in respect to size of egg—which is very large—we have signs of some other influence.

History.—Nothing is definitely known in respect to the Bruges fowl, which is bred chiefly by amateurs. Of late it has received more attention than was at one time the case, but is little known outside its own district, where its excellent table properties are fully recognised.

Economic Qualities.—The chief value is for table purposes, as these birds carry a wonderful amount of flesh, chiefly upon the breast, which, however, is like that of all corresponding races, very firm and hard, and birds require to be hung a long time after killing. For that reason they are most serviceable when crossed with softer-fleshed breeds. As might be expected, they are somewhat slow in growth. The hens are very moderate layers, but, as already stated, the eggs are very large and fine in flavour. They make good sitters and mothers. Both old and young are very hardy indeed, splendid foragers, but require full liberty. The chickens are wonderfully precocious, and the cockerels commence to fight when two months old, as a consequence of which they cannot be easily kept by the ordinary farmer.

Description.—In appearance this race clearly indicates its connection with cock-fighting, as it has powerful limbs and wings, with long reach and hard muscle; it is very large, with a well-developed breast, massive in front; neck long and strong, well covered with hackle; head large and long, very strong; eye bright and large; comb and wattles small, the former uneven; earlobes small, red; tail rather full; legs long and strong, well furnished in the male with black spurs; feet large and well spread, four toes on each foot. Weight: males, 9 to over 11 pounds; females, 8 to 9 pounds. The breed follows closely the shape of the Indian Game, but is larger and heavier in body.

Varieties.—As in the English Game, there are many colours, which we need not fully describe. The principal varieties are named at the head of this section. A favourite is the Blue, so-called, which is not very pure in colour, but the Blacks are stated to be the largest and most vigorous.

FLEMISH CUCKOO.

NOMENCLATURE: *English*, Flemish Cuckoo; *French*, *German*, *Dutch*, Coucou de Flandre; *Hungarian*, Flandriai Kendermagos.
VARIETY: One.
CLASSIFICATION: General Purpose.
COLOUR OF FLESH AND SKIN: White.
COLOUR OF LEGS AND FEET: Pinky-white.
COLOUR OF EGG-SHELLS: Medium yellow.

Origin.—Very little is known as to the origin of this fowl, which is met with to a limited extent in Belgium and on the French border. As we have previously noted, fowls with cuckoo plumage are common not only in Britain and America, but in various districts of Europe, and the modern Coucou de Flandre has apparently been evolved from this general type. What other influences have been brought to bear are described by our friend M. Vander Snickt, of Brussels, who states* that 'the Coucou de Flandre is the ancient Coucou de Malines, which existed for more than fifty years before it was increased in size by crossing with the large Light Brahma of Antwerp.'

History.—In Belgium the Coucou de Flandre is not very well known, and is chiefly in the hands of a few breeders. It has been brought forward by the efforts of MM. A. Detroy and Édouard Labbe, who sought for and carefully selected typical specimens over a series of about twelve years.

Economic Qualities.—The race is very vigorous, and is especially suitable for heavy soils and upon low-lying lands where fogs prevail, such as are common in many parts of the Low Countries. The hens are excellent layers of large eggs, which are tinted in shell and fine in quality, laying commencing when the birds are about seven months old. They are good egg-producers in winter, and make reliable sitters and mothers. The chickens grow quickly, and can be killed when three to four months old. The flesh is delicate, fairly abundant, and white in colour, and relatively to the size of body they are light in bone.

Description.—The Coucou de Flandre has a large but not heavy body, very round, prominent in breast,

* *Chasse et Pêche*, July 15, 1900, p. 673.

with a short back and wings; the neck is of medium length, covered thickly with neck-hackles, which just touch without covering the shoulders; head short and thick; surmounted by a large single comb, well serrated, and carried low behind without touching the neck; beak short, strong, either white or lightly ticked with pale horn colour; the tail is short and carried high; legs strong and of medium length, yet fine in bone and pinky-white in skin, sometimes ticked with blue-black, or in chickens with grey; there are four toes, which have white or clear horn nails. Weight: males, 6½ to 9 pounds; females, 4½ to 6 pounds. The colour of the plumage in both sexes is clear or silver grey, each feather crossed by bars of blue-black, but generally there is a good amount of white at the root of the tail.

HERVE.

NOMENCLATURE: *English*, *French*, *Danish*, *Spanish*, Herve; *German*, Selfkänter; *Hungarian*, Liegei.
VARIETIES: Black, Blue, Cuckoo.
CLASSIFICATION: Egg Production.
COLOUR OF FLESH AND SKIN: White.
COLOUR OF LEGS AND FEET: Black and Blue, dark; Cuckoo, white.
COLOUR OF EGG-SHELLS: White.

Origin.—We have not been able to obtain any satisfactory information as to the origin of this race of fowls, which is bred to a limited extent in the eastern districts of Belgium. It has a good deal of Hamburgh character, but is longer in the leg.

History.—Whilst fowls of this type are to be met with in the Liége district, the better specimens are chiefly in the hands of amateurs. It does not appear to be much known elsewhere, and is not likely to win favour except among exhibitors.

Economic Qualities.—The chief quality of these fowls is egg production, as they are very prolific, but their eggs are small. They are very hardy, excellent foragers, and thrive well on the high plateaus of the Herve country, in the province of Limbourg, to the north of Liége. On these rocky hills the cattle as well as the poultry must be smaller than on the rich pastures of the west. For instance, the cows kept there are of the same race as the Dutch, which latter are half black and half white, and weigh upwards of 2,000 pounds, whilst those of Herve are nearly black, and do not weigh more than 1,200 or 1,300 pounds. The same is true with the fowls. The chickens are very precocious, and are largely used at that stage as milk chickens (*poulets de lait*), for which purpose they are excellent, but when older do not carry much flesh, which, however, is white.

Description.—It is a small, active breed, almost as diminutive as some races of Bantams; long in body, rather flat in front, showing the thighs clearly; the neck is of medium length, well covered with hackle; face clean and red; comb single and small in size, the spikes thin and narrow; wattles small; earlobes red; it has well-spread toes, of which there are four; the tail in the male is carried high, with not very abundant sickles. Weight: males, 3 to 4½ pounds; females, 2½ to 3½ pounds.

Varieties.—BLACK.—The most common is generally called *Herve*. It is entirely black in plumage, with black legs and feet, and white toenails. It has black iris on the eyes.

MANHEID.—This is similar to the Herve except in plumage, which is blue, each feather tipped with black.

CUCKOO.—Called 'Cotte de fer,' in which the plumage is cuckoo, with legs and feet white.

HUTTEGEM.

NOMENCLATURE: In all countries, Huttegem.
VARIETIES: Gold Cuckoo, Ermine, and many others.
CLASSIFICATION: General Purpose, and for brooding of ducklings.
COLOUR OF FLESH AND SKIN: White.
COLOUR OF LEGS AND FEET: Bluish-white.
COLOUR OF EGG-SHELLS: Tinted.

Origin.—The common breeding-fowl (*race couveuse*), known probably for centuries on the meadows of the Scheldt in Belgium, has been considerably modified, and the modern breed called Huttegem greatly differs from it. The introduction of the Coucou de Malines has changed its character, but it is suggested* that the Golden Braekel, the Buff Cochin, and the Bruges fowl have also been used in its production. Upon this point, however, there is a great amount of uncertainty, and no definite records appear to have been kept as to its origin. The appearance of the fowl justifies these opinions, but we have not yet discovered any actual statements which can be regarded as reliable. The Audenarde district is very moist, and its evolution has been in response to a need for a hardy, vigorous fowl, able to bear the local conditions, in which respect it appears to be successful.

History.—In the district bordering on the Escaut River in Belgium large numbers of ducks are bred in winter, and as the soil is very humid, a hardy fowl is necessary for the duty of hatching and rearing the ducklings. It is the need of rearing ducklings on the ice and in the snow from October to mid-April which has led to the development of the Huttegem fowl, as it is vigorous, able to withstand the moist conditions, is a reliable sitter and mother, and large in size of body. As might be expected under such conditions, small attention was paid to external characters at first, but in process of time the two types named below have

* *Chasse et Pêche*, December 4, 1898, p. 158.

been evolved, which types are produced by Malines influence, and the old breed is recognised with both single and rose combs.

Economic Qualities.—The maternal instinct has received special attention, and the hens are very ardent and early sitters, continuing broody for nearly three months. They cover seventeen to nineteen duck eggs with a successful result. The chickens are somewhat slow in growth, but fatten well both as chickens and when older. The flesh is reported to be excellent in quality, and the eggs are large in size and of a medium tint.

Description.—The body of the Huttegem fowl is large, so that the hens may cover as many eggs as possible, and follows largely that of the Cochin, except that cushion is not desired, but plenty of fluff on the sides, modified to some extent by the Bruges influence already mentioned. The neck is very thick, with a well-developed throat, and the head large. The legs are short, and are well covered with feathers, thus following the Asiatic parents, and the body feathers are soft. Four toes on each foot is the accepted number. Weight: males, 9 to 11 pounds; females, 7 to 9 pounds.

Varieties.—There are single and rose combed varieties, in both of which the plumage is what is known as gold; that is, very similar to the Partridge Cochin, but the markings are different.

Gold Cuckoo.—In this the neck-hackle is barred, giving a cuckoo marking, and on the back, thighs, and under-parts also; the comb is generally single, but sometimes rose; the earlobe red and ticked with white; the legs and feet bluish-white.

Ermine, Buff, or Gold.—Here we have more of the Brahma character, for whilst the body colour is the same as in the other variety, the hackles have black markings, as in the Light Brahma. The comb is small and rose, and the legs and feet pink ticked with blue.

BRABANT.

Nomenclature: *Belgian, Danish*, Brabanconne; *German, Dutch*, Brabanter; *Hungarian*, Brabanti.
Varieties: Black, and others.
Classification: General Purpose.
Colour of Flesh and Skin: White.
Colour of Legs and Feet: Light slate-blue.
Colour of Egg-shells: White.

Origin.—How long this type of fowl has been known in the south-east districts of Belgium cannot be told, but it is claimed that it is a very ancient race, spread to a considerable extent in the Walloon Provinces, from Brussels to Luxembourg. It is very strong in its individual characters, and has decided relationships with the breed which we call White-crested Black Polish, but which on the Continent of Europe is known as Hollandais—that is, 'Dutch'—as the last-named breed undoubtedly is a native of Holland. M. Louis Vander Snickt says* that the Brabant is 'very common, not produced by crossing; it is, on the contrary, an ancient race preserved pure for a long time, but which, after having been neglected certainly for more than a century, persists by atavism in returning to its original type. Its success is due to its remarkable qualities.' Beyond this we have been unable to proceed. There are those who believe that the type has existed in Belgium for hundreds of years, and we have seen that fowls of what we call the Polish race have been known for a long time in Northern France.† When we deal with that class of fowl it will be found that the so-called Polish have a much wider distribution than is generally supposed. In the absence of more authoritative details we can merely state that what is now called the Brabant fowl has been fairly general in the south and south-eastern districts of Belgium for a longer period than the memory of man, and that so far as we know records do not exist which will materially help us. It has been said by a careful observer that this class of fowl was universal in Southern Belgium in the eighteenth century.

History.—The name Brabanconne was given to the race by M. Louis Vander Snickt, who had spent many years in studying the various races of fowls met with in the Low Countries, and to whom is largely due their preservation from extinction, and the adoption of definite lines upon which breeders can proceed to secure some measure of uniformity. That gentleman ever keeps the economic qualities in view of any fowl or bird which he breeds or induces others to breed; and, whilst regarding the adoption of fixed standards as essential to progressive aviculture, he places foremost the productiveness in one direction or another. Our attention was first called to this fowl in 1897, but it had been undergoing the process of selection for some years prior to that date, and the improvement is most marked, but it will take some time ere all the influences introduced as a result of indiscriminate breeding are eliminated.

Economic Qualities.—The vigour and hardihood of this race is greatly in its favour, as it is specially suited for farm purposes, more especially upon land where it can find a considerable amount of its own food. It is a remarkably good layer of large-sized eggs, which are white in shell. As a rule, the breeds which produce tinted shells lay eggs smaller in size. The hens are non-sitters, which evidently means that they are poor sitters, and cannot be depended upon for maternal duties. The chickens are hardy and fairly precocious. The hens are early layers, and excellent egg-producers in winter. The males are very virile,

* *Chasse et Pêche*, August 21, 1898, p. 683.
† See Crèvecœurs, p. 86.

and will serve as many as eighteen hens, whilst they are small eaters. Pullets often commence to lay when five months old, and the shells of their eggs are thick and strong, so that they travel well. In respect to table properties the race compares favourably with many others, for when the birds are young they carry a good quantity of flesh. It is, however, somewhat hard when older. Keeping in view the importance of increasing the output of eggs in the winter season, and of supplying the market with what it desires, the Brabant fowl is a race worthy the attention of practical poultry-keepers.

Description (Fig. 45).—This fowl is very large in body, giving the appearance of a strong, hardy bird, but it is not equally heavy in bone. That it is evidently a good layer can be determined by the shape of body, which thickens considerably from breast to stern, and there is great development in the region of the egg organs. The posterior part of the body is carried low, without the legs being short, and in the case of the hens almost touching the ground. The neck and legs are of medium length, and are as thin as possible. The comb is small, single, folded, and hanging over the beak, and the head is surmounted by a small crest, more in the females than the males, as the head feathers are flat in the cocks and not so apparent; the comb of the cock is erect. In fact, the latter, even though of the purest strains, are often bred without crest, that feature being dormant, for it is found in their progeny fully developed. This crest should not be as large or globular as in Polish; as in that case the economic qualities and the natural vigour of the fowl are correspondingly weakened. The plumage in the best specimens is black throughout, but there are specimens which have a good deal of red in the feather. Black, however, is preferred, and is decidedly the most pleasing in appearance. The eyes are black; the legs and feet are of a light slate-blue.

Discussion has arisen as to the colour of the earlobe, which must be white. There is no reason why that should not be the case, but we cannot agree with the suggestion that white-eared hens are better layers than those with red earlobes. Some of the best layers we have known had red or yellow earlobes, and we regard this as to a large extent an arbitrary point of no practical value, but which ought to be in accordance with the colour of flesh and skin. A yellow earlobe in the Brabant would indicate a cross with the Leghorn, as there has been a large number of that breed in the district, but which is undesirable. One breeder* states that he obtains the largest eggs from medium-sized hens, which confirms our own experience, and would indicate that it is an error to breed for large size of body in a fowl which is designed for egg production, as a small hen is more active than a large one, and has, therefore, less frame and muscle to support.

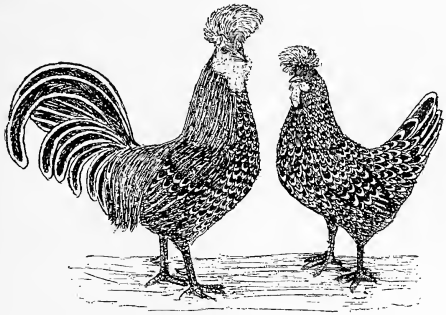


FIG. 45.—BRABANT FOWLS.

ANTWERP BRAHMA.

NOMENCLATURE: *Belgian*, *French*, Brahma d'Anvers; *German*, Antwerpener Brahma; *Hungarian*, Anversi Brahma.
VARIETIES: Ermine, White.
CLASSIFICATION: Table.
COLOUR OF FLESH AND SKIN: White.
COLOUR OF LEGS AND FEET: White.
COLOUR OF EGG-SHELLS: Tinted.

Origin.—This breed was imported directly from China many years ago to the Antwerp Zoological

* *Chasse et Pêche*, April 23, 1900, p. 479.

Gardens as a single-combed fixed breed, growing wonderfully the first five months. It is evidently a pure Shanghai, and thus differs from both the English and American Brahma and Cochin.

History.—The race has been bred for many years in Belgium, but it is within the last decade that it has received greater attention. Its influence is seen in many directions throughout the country.

Economic Qualities.—A hardy, vigorous fowl of large size, it is said to lay an astonishing number of eggs, is good as a winter layer, and the hens make excellent sitters and mothers. It is good in flesh qualities, and the chickens grow fast.

Description.—In general character the Antwerp Brahma follows very closely the Light Brahma, but has white skin, legs, and beak. It is feathered on the legs and feet, the chief difference being that it has a single comb.

Varieties.—Ermine, following the Light Brahma, and White, the latter a sport due to failure of the black pigment in the plumage.

CHAPTER IX

DUTCH RACES OF FOWLS

Breda **Owl-Bearded** **Friesland**
Crested Dutch **Dutch** **Drente**

It has already been shown that the Low Countries, in which term is included both the modern kingdoms of Belgium and Holland, the date of whose separation was 1830, have been celebrated for poultry-breeding for centuries, and that one at least of our British races —the Hamburgh—owes much to Dutch influence. The same is true in respect to a greater number of German breeds of fowls. As might be anticipated, it is somewhat difficult to determine in some cases which breeds belong to Holland and to Belgium respectively. For instance, the Brabant fowl is met with in both countries, and may be claimed equally by each. It is included among the Belgian races for convenience, due to the geographical fact that the province from which it takes its name is included in that kingdom, without any attempt to suggest that it exclusively belongs thereto. In fact, it appears to be met with as much in Holland as in Belgium.

There is, however, one important point which should be kept in view—namely, that when the Low Countries were united the generic terms Holland or Dutch were applied as much to Flanders and Brabant as to Friesland, and consequently the name 'Dutch everyday layers,' given at one time to Pencilled Hamburghs, might also refer to fowls imported from what is now Belgium. But from the natural conditions of the country, the more southern parts of the then kingdom of Holland would be more favourable to poultry-breeding than the low-lying lands forming the Dutch country. Even now it is evident that the Belgians are more disposed to practical poultry-keeping than the Dutchmen, and the latter have found greater attraction in the development of external or fancy characters.

BREDA.

Nomenclature: *Dutch*, *German*, *English*, Breda or Gueldre; *French*, Poule de Breda or Poule à bec de Corneille; *Spanish*, Breda.
Varieties: Coucou, Black, Blue, White.
Classification: Table and Eggs.
Colour of Flesh and Skin: White.
Colour of Legs and Feet: Slate-blue.
Colour of Egg-shells: White.

Origin.—The Breda is generally acknowledged to have originated in Holland, where formerly it was bred to a considerable extent. From the appearance it would seem to owe much to Asiatic influence, but we have no definite records as to the basis upon which it was formed. It is also said to have been used for crossing with Cochins in later years. The Low Countries have had for centuries direct commercial intercourse with the Far East, more especially when Holland was a great colonial Power, and it is reasonable to assume that frequent importations then took place, which were used in improvement of the native races.

History.—From such evidence as is available, the Breda was at one time largely kept in Holland, but the introduction of other breeds, which were either more attractive in character or, as a result of changed conditions, more profitable, lessened their number, and they were almost displaced. Within recent years the breed has regained a portion of its former position. It has, however, not found many adherents elsewhere, except to a limited extent in Northern France and Germany.

Economic Qualities.—The Breda is very hardy, a good forager, and the chickens are easily reared, except when feathering, when they must be kept from taking cold. The hens are prolific layers of large-sized eggs, which are white in colour of shell, and they sit rarely. The chickens grow somewhat slowly, as is usual with heavy breeds, but the flesh, which is white, is well placed on the breast, and is good in quality. At a suitable age the birds fatten very well indeed, and increase greatly in weight by this process. The Breda fowl thrives well in confinement if supplied with an abundance of green food.

Description.—The Breda is a large-bodied fowl, well developed, with prominent breast, strong thighs, and rather long legs; back broad and slightly sloping to the tail; the neck is short and well arched, covered

with an abundant hackle ; head strong and long, with a stout, well-curved beak, which is dark at the base and of a light horn colour at the tip ; the comb is rudimentary, broad, covering only the front of the skull, and having a depression in the centre which is unique ; behind is a very small crest of short feathers which lie towards the back ; face and wattles, which are round and long, red ; earlobes generally white ; the cheeks are full and bare of feathers ; the iris of the eye is red and the pupil black ; the toes on the feet are of medium length, and on the outer side, as also the legs, slightly feathered, thus showing affinity with Asiatics ; the colour of the legs and feet is slate-blue ; the tail in the male is very abundant, and carried well up. Weight: males, 6½ to 9 pounds ; females, 5 to 7½ pounds. In appearance these fowls are very upright, active in habit, and sprightly in carriage.

Varieties.—The Cuckoo Breda is often called the Gueldre. The feathers in both sexes, with the exception of the sickles in the cock, which are black with grey grain-like markings, have a ground colour of grey with transverse semicircular bars of black, giving what is known as cuckoo plumage.

Black and White are each self-coloured, according to the colour named. The Blacks are brilliant, having metallic violet reflections.

Blues are much less common, and the plumage is a mixture of blue and black, presenting all the difficulties found in fixing this colour on any race of fowls.

CRESTED DUTCH.

Nomenclature: *Dutch*, Hollandsche Kuifhoender; *English* (one variety), White-crested Black Polish; *French*, Hollandaise Huppe; *German*, Hollandsch Kuifhoen; *Italian*, Olandese a Ciuffo; *Spanish*, Holandesa Crestada.
Varieties: Black with White Crest, Blue with White Crest.
Classification: Non-sitting.
Colour of Flesh and Skin: White.
Colour of Legs and Feet: Blue-grey.
Colour of Egg-shells: White.

The race which is designated under the above title is, so far as concerns one of the varieties, usually called White-crested Black Polish in English poultry books and exhibitions, and is well known under that name. Many writers classify all so-called Polish fowls together, regarding them as of the same race, which plan is followed by the English Poultry Club in its Standard of Points. Some of the most careful students, whilst using the general nomenclature, recognise that the Crested Dutch are distinct in several important characteristics from the Gold, Silver, and Chamois Polish, or, to use the Continental name, Padoue. After careful study of the question we have come to the conclusion that the latter view is correct. Hence another name is adopted to that under which this race is commonly known. In doing so we are acting in accordance with the custom generally followed elsewhere, and especially in Holland itself. It may be thought that in a work which does not consider the exhibition or ornamental aspect of poultry-keeping breeds like the Crested Dutch or the Polish should hardly find a place. But considering the influence of these races upon other breeds and their widespread distribution, it is essential that they be included.

Origin.—The Crested Dutch has been known in Britain for more than 100 years. Bewick refers to it in his 'British Birds,' and Moubray thus speaks of it under the name of 'Poland':* 'The Poland fowls, as they are generally called, were chiefly imported from Holland. Their colour shining black, with white tops on the head of both cock and hen. The head is flat, surmounted by a fleshy protuberance, out of which spring the crown feathers on top, white or black, with the fleshy King David's crown, consisting of four or five spikes. They are not so thickly covered with feathers as some other breeds, and still less so with down. Their form is plump and deep, and the legs of the best species not too long.' From which it is evident that the Crested Dutch were well known. Buffon mentions that this type of fowl was known in France in the eighteenth century. Wingfield and Johnson state † that 'if we are content to trace the countries through which we have received these fowls it appears highly probable that they were introduced into the Netherlands by the Spaniards during their occupation of the Low Countries; and from Germany, Holland, Belgium, and latterly Marseilles, we have been in the habit of receiving our best specimens. To all who are acquainted with the pictures of the Dutch school the bearded Poland is known as a frequent feature.' This is supported by another writer of about the same period,‡ who says: 'Polands, from what information I can gain, appear to have been brought by the Spaniards from the East, by them taken into the Netherlands, and thence we received them.' What the East here means is difficult to trace, for every trading country at that time, if beyond Spain, was regarded as East or West. From the peculiar characteristics of these fowls, explained when dealing with the Polish races proper, it is probable that they came from Italy to Holland, and that they own the same ancestry as the Polish or Padoue, but were bred in Holland on different lines. At this point it is unnecessary to trace the descent further. The Dutch and Belgians for centuries have been skilled breeders of poultry, and whatever came into their possession was modified in accordance with their own ideals, of which fact a striking instance is the White-faced Black Spanish. Further, at the period referred to the inter-

* 'Practical Treatise,' B. Moubray, fifth edition (London, 1824), pp. 18-19.
† 'The Poultry Book,' Wingfield and Johnson (London, 1853), p. 167.
‡ Mr. B. P. Brent, in *Cottage Gardener*, August 26, 1852, p. 343.

communication between the Netherlands and Italy, political and commercial, was very great. As already seen, there is a breed in Italy at the present time, the Polverara, which has several features in common with the Crested Dutch, and by breeding could in a few years be made to resemble it.

History.—There is very little to add in respect to the history of the fowl. Bred first to a measure of perfection in the Netherlands, the Crested Dutch was distributed over Western Europe, and, so far as we can tell, was introduced into Britain about the close of the eighteenth century, probably at the time of the Napoleonic Wars, when so many English were in the 'Cockpit of Europe,' but possibly a century earlier, for during the Stuart period many political refugees from this country resided in Holland. At first they were called Poland fowls, but as early as 1838 * the term Polish was used alternatively, and in 1850 came into more general favour. They have always had a limited number of admirers, but have never become popular, for reasons stated below.

Economic Qualities.—There can be no question that the Crested Dutch has excellent qualities, in that it is very gentle and thrives well in confinement on dry soil and in a favourable climate. The hens are good layers of large white-shelled eggs, which are fine in flavour. They sit very rarely indeed, and can be classed among the non-sitting races. The flesh upon the body is more abundant than usual with this class of fowl, especially on the breast, and is very delicate. Any race, however, which has so large a crest is subject to cold in a moist climate, as a result of the head feathers absorbing rain during unfavourable weather, and the mistake made has been undue development of that feature. Otherwise the Crested Dutch, as also the Polish, would have proved one of the most valuable of the egg-producing breeds. For that reason it cannot be recommended to practical poultry-keepers. To keep specimens in good form they must be protected against rain, and during the growing stage, when the crest feathers are forming, the chickens are difficult to rear. Moreover, such a mass of feathers is useless, and the food required to produce and support them is wasted. That the Crested Dutch is one of the handsomest fowls we possess is generally admitted. It is, however, more valuable for exhibition or ornamental purposes than as an economic breed.

Description. — The standards issued in this country have erred on the side of attempting to make the Crested Dutch and the Polish into one breed. We therefore prefer the description adopted on the Continent. M. La Perre de Roo says:* 'At the first appearance we find a striking analogy of conformation between this race (Crested Dutch) and the Padoue (Polish); but this analogy is more apparent than real, and there exists between them marked differences which warrant our not confounding or identifying the two races. Smaller, but more active and alert, a better forager, and more prolific than the Polish, the Crested Dutch has the wattles extremely developed in the cock and reduced to the smallest proportions in the hen, and they differ in the absence of a beard or muff. As a layer the hen is more prolific and more prolonged than the Polish; and

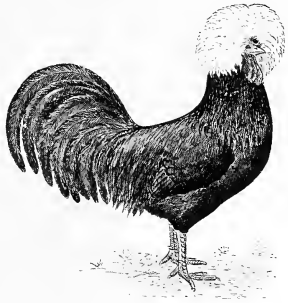


FIG. 46.—CRESTED DUTCH.

* 'Poultry,' by Walter B. Dickson (London, 1838).

* 'Monographie des Races de Poules,' par V. La Perre de Roo (Paris, 1902), pp. 266-267.

Dutch farmers, who recommend them warmly for the formation of a laying flock, attribute to them all the merits of the common fowl.' The body is deep and short, with large shoulders and a prominent breast; the wings are of medium length, carried close to the body; the neck is short and strong, fully furnished with long, narrow hackle; the earlobe is white; the head is short and large, with a bright horn-coloured beak; the comb is rudimentary, consisting of two or three small spikes; the crest is large, covering the head, but falling from the centre all round in the cock, and globular in the hen; there is no beard, whiskers, or cravat; the legs are short and strong, with fine feet, upon which are four toes, and of a dark slate-blue colour; the tail is very full, and in the cock abundantly furnished with sickles. Weight: males, 5 to 6½ pounds; females, 4 to 5 pounds.

Black-crested White Dutch. If so, they are extinct, as we have never seen any specimens, much as we have sought for them. Breeders have tried in vain to produce what would be a very striking variation from the general type.

OWL-BEARDED DUTCH.

Nomenclature: *English*, Owl-bearded Dutch; *Dutch*, Uilebaard; *French*, Barbes Neerlandais; *German*, Niederlandisch Parisbackchen.
Varieties: Black, Gold-laced, Silver-laced, White.
Classification: General Purpose.
Colour of Flesh and Skin: White.
Colour of Legs and Feet: Slate-blue.
Colour of Egg-shells: White.

Origin.—It is very evident that the race under review owns the same ancestry as the Bearded

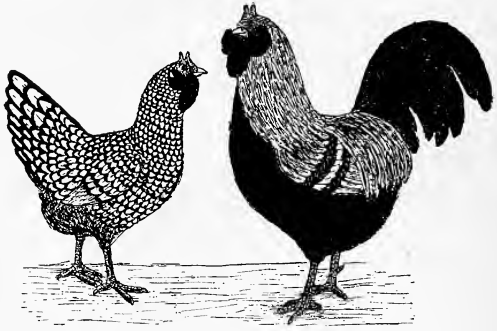


Fig. 47.—Silver-laced Owl-bearded Dutch.

Varieties.—Of these there are two, as already mentioned, but the best known is the White-crested Black (Fig. 46), in which the body plumage is black, frequently with metallic reflections; the crest in both sexes should be entirely white, but it is difficult to obtain this in perfection, and as a result a great amount of trimming is resorted to in show specimens, which is a further explanation of the non-popularity of these fowls.

Blue with White Crest is a variety found in the Low Countries, but to a much less extent than the former, which it resembles in all respects except colour of body plumage. That should be slate-blue, marked with dark grey—one of the most difficult colours to secure in domestic fowls. Our remarks above as to the white crest apply in this case also.

At one time it is said that there existed a race of Thuringians described among the German breeds. M. Houwink, Secretary of the Dutch Poultry Society, suggests that it is probably a cross between the Hamburgh and the Brabant, but acknowledges that the Owl-bearded Dutch is most frequently met with in Thuringia and the Hartz Mountains. If that cross gave rise to the breed, we should expect some record showing that it originated in Holland; but, as stated below,* the more probable explanation is that it has come from Eastern Europe in the first instance, and been modified in accordance with local conditions.

History.—Upon this point very little evidence is forthcoming. The race is bred to a limited extent in the Low Countries. If the relationship with the Bearded Thuringian is accepted, it may be assumed

* See Bearded Thuringian, Chapter X.

to have received the greater attention in Germany, where a large number of variations are to be met with. The chief difference between the German and Dutch are that the former has a large single comb, whereas the latter is small and horned.

Economic Qualities.—This race is very hardy, easily reared, a good forager, and lays well if given plenty of exercise. The hens are excellent layers of medium-sized eggs, which have the peculiarity of being nearly round, and are good sitters and mothers. The flesh, which is white, is well distributed, but in size of body they are small, and it is, therefore, not very abundant.

Description.—In carriage these birds are very graceful; breast full and body round; back short; neck of medium length, well covered with hackle; head small, with short horned comb; beak strong at the base and short; the wattles are very small, and together with the earlobe, which is pinkish, almost entirely hidden by the full beard, standing well out from the cheeks and around the throat, giving the breed its distinctive character; the tail in the male is carried high, with sickles of moderate length; legs of medium length, fine in bone, clean, slate-blue in colour; four toes on feet, and white toenails. Weight: males, 4½ to 5½ pounds; females, about 1 pound less.

Varieties.—In the BLACK and WHITE respectively the plumage is self-coloured throughout, including the beard, showing a glossy black in the former, which has a dark horn beak, and silver-white in the latter.

GOLD-LACED.—The ground colour is golden bay, with black lacing, usually found to a greater extent in the hen than the cock. The latter has a dark breast, slightly laced, striped hackles, bright bay wing-bow and flights, showing a broad bar across the wing; the tail is black, beak light horn, and beard black.

SILVER-LACED (Fig. 47).—In this case the ground colour is silver-white, but in all other respects resembles the Gold-laced.

FRIESLAND.

NOMENCLATURE: *English*, Friesland; *Dutch*, Friesche Hoenders; *French*, Poules Frisones; *German*, Friesische Hühner.
VARIETIES: Gold-pencilled, Silver-pencilled, Yellow-pencilled, White, Black, Cuckoo.
CLASSIFICATION: Non-sitting.
COLOUR OF FLESH AND SKIN: Greyish-white.
COLOUR OF LEGS AND FEET: Slate.
COLOUR OF EGG-SHELLS: White.

Origin.—These fowls appear to have been bred for a long period of time in Holland and Western Germany, and were formerly known as Assendelfters. Definite information as to their origin is unavailable, but from the appearance of the Friesland fowl it would appear that these and the Campine own a common ancestry. Such variations as have manifested themselves may be attributed to the different conditions met with in North Holland and the Campine districts respectively, in the first place, and to the different ideals in breeding in the second. But the resemblances are so great that any slight variations do not affect the evident fact stated.

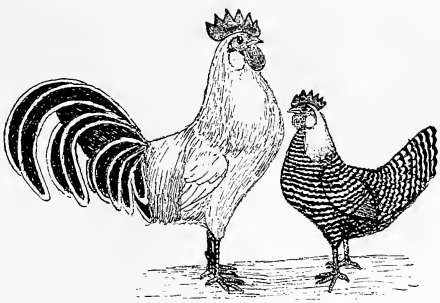


FIG. 48.—SINGLE-COMBED FRIESLANDS.

History.—Dutch breeders claim that the Friesland fowl is the progenitor of our Pencilled Hamburghs, and there is much to be said in favour of that opinion, though, as previously stated, as much may be said for the Campine. The pencilling of the Friesland hen, however, more nearly resembles our Pencilled Hamburghs than does that of the Campine, in that it is

finer and more delicate. It is interesting to note in this connection that there has existed in Holland for a long period rose-combed Friesland fowls, called by the generic name Hollanders, and it is more than probable that some of these were imported and were incorporated into the Hamburgh family, although it is equally true that many of the 'Dutch everyday layers' had single combs when imported. As a result of breeding in Britain modifications have resulted, as might be expected, and the Friesland is not built upon so fine lines or is so perfect in plumage, but it is claimed to be hardier and more prolific. On the other hand, there has not been the improvement in size of egg noted in the Campine during the last twenty years, the result of careful selection with that end in view. It is only within recent years that this and several other Dutch races have received the careful attention necessary to fixity of character, but the Dutch Poultry Club is doing excellent work in that direction.

Economic Qualities.—These fowls are specially noted as egg-producers; hence the German name 'Todtleger' and English term 'Dutch everyday layers' given to them. Their eggs are smallish in size, more especially during their first year. They very seldom evince any desire to sit, and when broody—like all fowls of this type—are easily broken off. They are very lively, thriving best when given full liberty, and enjoy foraging for food, when they need but little in addition to what they can pick up. If kept in runs these must be covered over, for, like the Hamburghs, they fly very readily and can surmount a very lofty fence. They are shy of strangers, but tame with those who attend to them. Hardy in constitution, they can withstand all weathers, and it is by no means uncommon for them to roost in the trees the greater part of the year. Their qualities as table fowls are mediocre, except when very young, at which time they make excellent milk chickens.

Description (Figs. 48 and 49).—The Friesland fowl is similar in shape of body to the Hamburgh and Campine, but larger in size; they have fairly abundant hackles, and large sickle feathers in the cock's tail; head small and neat, surmounted by a single comb, standing upright in both sexes, rather large, reaching from the beak to the back of the head, with shallow serrations. In the Hollanders the comb is rose; the wattles are slender and fairly long; earlobe small and pure white; eyes large, dark brown; beak light horn colour, or blue with white tip; the body is short and round; legs fine, clean, slate in colour; four toes on feet. Weight: males, about 5½ pounds; females, 4½ pounds.

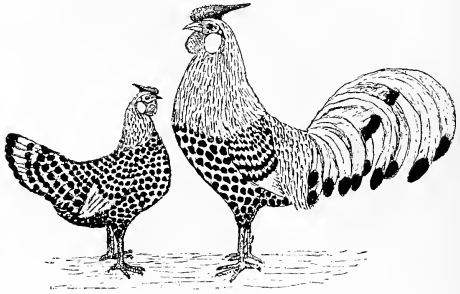


Fig. 49.—Rose-combed Frieslands.

Varieties.—As in Hamburghs, Campines, and Braekels, the Gold-pencilled and Silver-pencilled are the leading varieties, and the description of plumage of that first named may be accepted as equally applicable to the Friesland, so far as those two varieties are concerned.

Yellow-pencilled.—Upon these M. Houwink says* that 'besides the Gold-pencilled and Silver-pencilled there is a Yellow-pencilled variety, which is a cross between the two. They are of a dull lemon colour. This is not frequently met with, and much patience is required to secure colours thoroughly blended. Sometimes specimens are seen of a deeper yellow, which are obtained by crossing White upon Gold-pencilled, and it appears that black is more easily affected in crossing than any other colour. In the above cross the black becomes white, whilst the gold ground colour becomes a trifle lighter.'

* 'De Nederlandsche Hoenderrassen' (Meppel, 1900), p. 23.

WHITES and BLACKS are uniformly self-coloured, whilst the CUCKOOS are pencilled black on a light blue-grey ground.

In what are called the Holland fowls the same description will apply, except in respect to the comb, and the varieties are identical, save that in these are found two others, namely, Gold-laced and Silver-laced.

DRENTE.

NOMENCLATURE: *English*, *French*, Drente; *Dutch*, Drentsche; *German*, Drentische.
VARIETIES: Gold-laced, Silver-laced, Gold-pencilled, Silver-pencilled, Black, Speckled, Partridge, Cuckoo, Blue, Yellow, Black, White.
CLASSIFICATION: General Purpose.
COLOUR OF FLESH AND SKIN: Greyish-white.
COLOUR OF LEGS AND FEET: Slate.
COLOUR OF EGG-SHELLS: White.

Origin and History.—M. Houwink says:* 'The Drentsche fowl appears to have been left alone, they know to be good, it speaks well for the utility of this breed that they are still most frequently found in that part of Holland.'

Economic Qualities.—The same writer says* that 'these fowls are accustomed to the poor and meagre land of Drente, and make the best of it. Considering the size of body, the Drente fowl makes a fine bird for the table, as well as a good layer, although it cannot compare with the Breda, which is of a bigger build. But for ordinary peasants they are valuable, as they are quite able to pick up their living and require very little attention.' They are hardy, good layers of fair-sized eggs, white in colour, good flesh-producers, thrive equally in confinement as at liberty, and make good sitters.

Description (Fig. 50).—The Drente is a long-bodied fowl, fairly long in neck and legs; head small, sur-

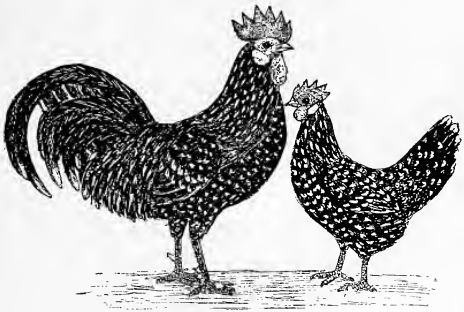


FIG. 50.—DRENTE FOWLS.

and remains, therefore, the nearest to the original type, the *G. Bankiva*, which, according to Darwin, is the progenitor of all classes of fowls, the varieties found in various countries being due chiefly to selection and crossing. That they are certainly an old race is proved by a piece of needlework made in 1805 by a girl, then eighteen years of age, in which a cock appears exactly the same as now. As the Dutch peasants are well known to adhere to anything that

* De Nederlandsche Hoenderrassen' (Meppel, 1900), p. 15.

mounted by a large single comb, well serrated; eye orange in colour; beak light horn colour; wattles long and slender; earlobe white, almond-shaped; legs strong, clean, four-toed, slate-grey in colour; the males have fair-sized sickles carried well up. Weights: males, 5½ pounds; females, 4½ pounds.

Varieties.—As these are as yet very uncertain and abundant, detailed description is scarcely possible.

* 'De Nederlandsche Hoenderrassen' (Meppel, 1900), p. 23.

CHAPTER X

GERMAN RACES OF FOWLS

Lakenfelder
Ramelsloh
Schlotterkamm
Bergische Crower
Moeven
Bearded Thuringians
Creeper
Augsburg

CONSIDERING the extent of the German Empire, the number of races of fowls which have originated there is comparatively few. Such as do exist are very much of the same type, owing their characteristics in large measure to breeds introduced from surrounding countries. This paucity may be partly owing to the great uniformity of conditions prevailing over many portions of Germany, but may also be attributed to the fact that in that country fowls have not entered into the food requirements to the same extent as in Britain, France, or Belgium, and eggs have been largely imported to supply the needs of the population. Further, the Germans have not given much attention as a people to stock-raising, with the exception of one or two branches, of which geese form a case in point. Within recent years poultry-keeping has proceeded largely upon fancy lines, and English methods followed in that direction; but there are evidences that a change is taking place, and it is not at all improbable that there are races of fowls in remote districts of which we have heard nothing as yet.

LAKENFELDER.

NOMENCLATURE: *Dutch*, Lakenfeller; in all other countries, Lakenfelder.
VARIETY: One.
CLASSIFICATION: Non-sitting.
COLOUR OF FLESH AND SKIN: White.
COLOUR OF LEGS AND FEET: Slate-blue.
COLOUR OF EGG-SHELLS: White.

Origin.—There is a great conflict of evidence as to the origin of this race of fowls. Statements have been made that they came originally from Jerusalem, and, in fact, specimens have been displayed under the name 'Lakenfelders de Jerusalem,' but they own no direct connection with the Holy City or with Asia, and are of Western creation. So far as we have been able to discover, they originated in West Hanover, and, it is stated, they owe a good deal to Campine influence, which can readily be believed from their shape and general type; but with what other race they were crossed to secure such striking modifications in the coloration of plumage we have been unable to trace. The name is thus explained:* 'It is said that the breed took its name from the appearance of its plumage, resembling white linen (*laken*) spread over a black field (*feld*).' The word 'Lakenfelder' is plural as well as singular.

History.—The first mention of the breed was about seventy years ago. 'According to reliable authorities it existed (in Westphalia or West Hanover) as early as 1835, and was then exhibited by Mr. Wirz, a collector of Customs, at Haldem. It originated most probably from the Campine, a breed largely kept in the same district, which was bred with dark tail, and frequently, also, very dark hackles. At present many splendid birds are produced in Ost-Friesland (East Friesland, Germany). The Lakenfelder was very popular in Hanover about fifty years ago, but the introduction of foreign breeds destroyed its popularity, and it almost became extinct. Fortunately, it has been rescued from oblivion, and restored to a measure of its former position.'† Our first acquaintance with the Lakenfelder was at the International Poultry Exhibition at St. Petersburg in 1899, where were several specimens, since which date we have seen others at various Continental shows. The first specimens were imported into Britain in 1901, and the breed has received a certain measure of favour amongst exhibitors, but as yet it has not been taken up by practical poultry-keepers. These small-bodied, egg-producing races have never attained great popularity in this country, where

* *Poultry*, May 16, 1902, p. 219.
† *Ibid.*

size of body, rightly or wrongly, is given a more important place than is accorded to it by foreign breeders. A change may come in process of time, but as yet no evidences are apparent of such an alteration in opinion.

Economic Qualities.—The Lakenfelder is built for laying purposes, in which quality it holds a good position, though not equal to the Hamburgh, Campine, or Minorca, so far as number produced is concerned, as 150 eggs per annum is the maximum recorded up to the present time. But the eggs are of an excellent size, and are pure white in shell. It is not in any sense a table fowl, though, like all the lighter-bodied varieties, it is excellent for milk chickens, due to its quick growth. When older the flesh is scanty and rather fibrous. Discussion has arisen as to its sitting instinct, and the claim is made by some breeders that it is a sitter, and by others a non-sitter. Probably a few hens become broody, as in all other breeds of a like class, and by selection their number could be increased, but the consensus of experience is sufficient to warrant our placing it in the non-sitting category. The birds are very hardy, active, excellent foragers, small eaters, and of rather a wild disposition. They are much more suited for keeping under conditions where they can have full liberty than in confined runs. We hope that the good qualities of this race may not be spoiled by increasing the size of body, or by breeding for huge fleshy combs.

Fig. 51.—Lakenfelders.

Description (Fig. 51).—The Lakenfelder is small in body, which is narrow in front, with back rather long, but deep and broad behind, as should be the case with a bird well developed in the region of the egg-organs, both as to breadth and depth. The body is carried almost horizontally. The neck is of medium length, with a small head, surmounted by a good-sized single comb, upright in both sexes, but larger in the male; the wattles are small, and the earlobe, which is well developed and almond in shape, white in colour; the thighs are short and strong, and the legs, which are slate-blue, are of medium length, with four toes on each foot; the wings are small and carried high; the tail is carried well, and the sickles fully furnished in the males. The special feature of this breed is the coloration of the plumage, which differs from that upon any other fowl with which we are acquainted. The following description appeared in *Geflügel Zeitung*, of Leipzig, and is quoted from a translation given in one of our poultry papers:* 'The plumage is pure white, with black tail and neck-hackle. Thus apparelled, the breed is of striking appearance, but it must by no means be assumed that perfect colouring is easily attainable, considering that black should be strictly confined to certain parts only. Cocks, in particular, are apt to show black markings in the centre of saddle feathers, and if the neck is sound black right up to the nape this defect is passed over, whilst if accompanied by white in neck-hackle it must certainly be condemned.

If we wish to preserve the black pure in neck and tail we must look to under-colour, which should be greyish rather than white, for the whiter it is the more will it tend to expel black from the plumage. Rather permit (in breeding) the greyish under-colour to slightly penetrate to the surface plumage, provided there is not too much black showing on the back, than the appearance of white in tail or neck-hackle. Some breeders consider white edging of the cock's sickles typical; in our opinion, however, this counteracts the proper breeding tendency, which should aim at black tail without any white.' In breeding it is found that the saddle-hackle is generally lighter than the neck-hackle and the tail; but often the ends of the saddle-hackle are tipped with black.

RAMELSLOH.

Nomenclature: In all countries, Ramelsloh or Ramelsloher.
Varieties: White, Black, Speckled.
Classification: Egg Production.
Colour of Flesh and Skin: White.
Colour of Legs and Feet: Slate.
Colour of Egg-shells: White.

Origin.—There is a great amount of uncertainty about the origin of this, the premier utility breed of Germany, with which we first became acquainted at the St. Petersburg Exhibition of 1899. M. Vander Snickt† claims it as a White Brackel, for which the only point we can find in support is the colour of the legs and feet, as the shape is much more upright than

* *Poultry*, May 23, 1902, p. 229.
† *Chasse et Pêche*, September 3, 1899, p. 789.

that of the Braekel, and the general style follows very closely the Italian or Leghorn. It cannot be questioned that at one time there must have been a considerable stream of Italian fowls into Germany, and we have come to the conclusion that the poultry of the Fatherland owe more to Italy than any other country until the last twenty years, during which time importations of English breeds have been constant and considerable. But what may be regarded as the native German breeds were in existence long prior to that period, and apparently before sufficient attention was paid to the keeping of records. With the exception of the colour of the legs, feet, and beak, the Ramelsloh fowl might be classed with large numbers of Italian fowls, where, as we have previously seen, yellow flesh and legs are by no means universal. In Italy we have seen many fowls with slate-blue legs and whitish skin which would have passed for the German variety in every way. For these reasons we have come to the conclusion that the Ramelsloh originated in the South of Europe, but from the fact that it has attained its present characteristics in Germany it must be treated separately. Probably crosses have fixed the variations between the two races.

History.—The Ramelsloh received very little attention even in its native country until the last few years, due to the fact that poultry-breeding was in a very primitive state in Germany. In a work published about twenty years ago* an account was given of the breed, accompanied by an illustration, and since that time it has attained a fair amount of popularity, due to its economic qualities. It has not, however, secured a place of any importance elsewhere, and for exhibition purposes does not meet with the same amount of favour as certain English and American breeds.

Economic Qualities.—The chief quality is egg production, but the Ramelsloh can hardly be classed as a non-sitter, and the hens are prolific layers of good-sized, white-shelled eggs. But, as is the case with nearly all the lighter breeds, the chickens grow rapidly, and are consequently valuable for milk chickens or broilers. When older the flesh is harder and less abundant. They are light in bone, very active and hardy, excellent foragers, and especially suitable for farmers.

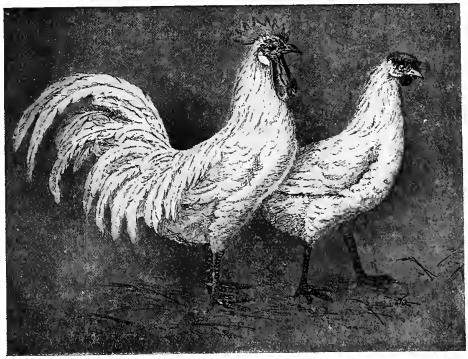


Fig. 52.—White Ramelsloh.
(*After Kramer.*)

Description (Fig. 52).—As we have already mentioned, the Ramelsloh follows very closely the Italian type, not so much the English Leghorn as that bred in Italy and America, which is more upright in carriage and flatter in breast than is found in the United Kingdom. The body is slight, with back sloping to the tail, and thicker behind, and the tail is carried

* 'Die Geflügelzucht,' Bruno Dürigen (Berlin, 1886), pp. 63-72.

high; the neck is long and slight, the head small, and surmounted by a medium-sized single comb, upright in the male, falling over in the hen, and well serrated; wattles long; the face is red, but above it are two lines of feathers looking like heavy eyelashes; the eyes are dark red, and the beak pale blue or slate; earlobes bluish-white; the legs are of medium length, giving the body a compact appearance, and, with the feet and toes—of which latter there are four on each foot—slate-coloured; the males have a well-furnished tail. Weight: males, 5 to 6½ pounds; females, 4½ to 5½ pounds. The plumage is bluish-white, but we have seen traces of straw colour—a characteristic of Leghorns.

History.—The name means 'loose or flabby comb,' as that decoration is large, somewhat coarse, and falls over in the hen. The breed would appear to be widely distributed, but has only recently been regarded as a pure race. From the description it is very similar to the Elberfeld described in French books on poultry, which suggestion is supported by the fact that Kramer* does not mention the last-named breed in his work.

Economic Qualities.—The Schlotterkamm is stated to be the best layer of all the German races, the eggs of which are white in shell and large in size; the flesh is delicate, but not very abundant. It is stated

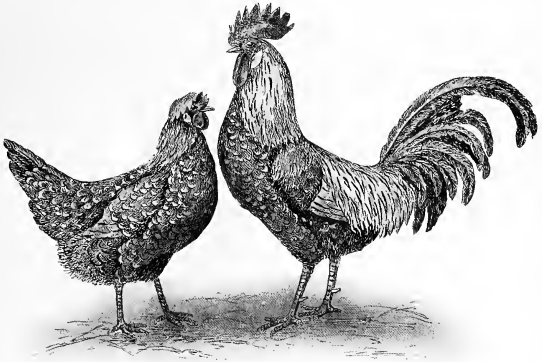


FIG. 53.—MOTTLED SCHLOTTERKAMMS.
(*After Kramer.*)

SCHLOTTERKAMM.

NOMENCLATURE: *German*, Schlotterkämme; *French*, Elberfeld; *Dutch* or *Flemish*, Schlotterkamm.
VARIETIES: Mottled, Black, Cuckoo.
CLASSIFICATION: Egg Production.
COLOUR OF FLESH AND SKIN: White.
COLOUR OF LEGS AND FEET: Dark blue.
COLOUR OF EGG-SHELLS: White.

Origin.—We have not been able to obtain any definite information as to the origin of this and cognate German races of poultry, but from the fact that they are chiefly found in Western Germany, on the Lower Rhine, and towards the Dutch border, we may, from their shape and general character, assume their descent from either the Italian or Netherland breeds.

to be hardy, active, an excellent forager, and the chickens grow quickly and are very precocious.

Description.—Body long, carried well in front, but somewhat shallow; back sloping a little to tail; breast broad and full; neck of medium length, carried well up, with full hackle; head long and strong; comb single, large, long from front to back, well set on, arched behind, deeply serrated; wattles long and rounded; face dark red and clean; eyes large and chestnut-red; earlobe rather long, rounded, and white; beak horn coloured, long, and slightly curved; wings long, carried high and close; tail full, broad, and with

* 'Taschenbuch der Rassegeflügelzucht,' Von Rudolf Kramer (Würzburg, 1899).

long sickles; legs strong and clean, light blue in colour, rather short; toes four, with sharp, flesh-coloured nails. Weight: males, 5 to 6 pounds; females, 4½ to 5 pounds. In general appearance the race is light, active, and well developed behind.

Varieties — Mottled (Fig. 53). — The ground colour of the male is black, evenly mottled with silver grey; the primaries and secondaries of the wings silver grey, with a spotted wing-bar and a darker grey wing-bow; the hackles are of silver grey with a narrow black stripe, and the tale black. In the hen the body follows the male, except the under-parts, which are black, and the neck is darker.

Black.—In both sexes the entire plumage is metallic black, very brilliant in sheen, without any spots or markings.

Cuckoo.—The ground colour of the plumage is of a light grey, each feather diagonally marked with dark grey bars. It is probable that both the Black and the Cuckoo have been obtained by variations from the Mottled.

BERGISCHE CROWER.

Nomenclature: *German*, Bergische Kräher; *French*, Chanteur du Berg; *Dutch*, Bergkräher.
Variety: One.
Classification: Egg Production.
Colour of Flesh and Skin: White.
Colour of Legs and Feet: Blue-grey.
Colour of Egg-shells: White.

Origin.—Although separate designation is given to this race, it is evident that it is closely allied with the Schlotterkamm, and might be regarded as a variety thereof. In fact, M. Louis Vander Snickt says* that 'it is a sport from the common race known as the best egg-producer in Germany, called Schlotterkamm' and without further consideration of the question that statement may be accepted, as it is fully borne out by the appearance of the two races.

History.—The name is derived from the fact that it competes greatly in crowing matches, and that the voice of the fowl has that clearness which is more common in mountainous districts than on the plains. It is chiefly bred in the hill districts of Rhenish Prussia, but more by reason of its sportive than for its economic qualities.

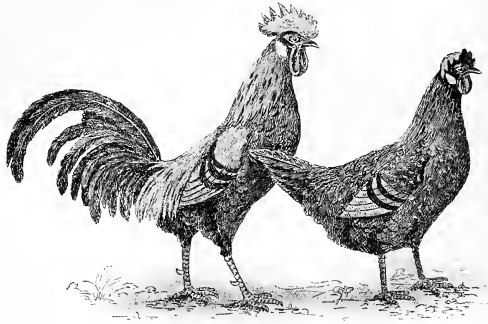


Fig. 54.—Bergische Crowers.
(*After Kramer.*)

Economic Qualities.—This variety is also a very good layer of large-sized, white-shelled eggs; the flesh upon the body, whilst not very abundant, is good in quality and fine in texture, having a nice white skin; the chickens are precocious and quick in growth, and are said to be easily reared; the fowl is hardy, except where it is kept under unnatural conditions. As already stated, it is chiefly bred for the crowing competitions which are frequently held in Western Germany and Belgium, and the males are capable of remarkably prolonged crows.

Description (Fig. 54).—The shape of body nearly resembles that of the Schlotterkamm, showing great length, with upright carriage and elegant appearance; breast well rounded and carried high; back long,

* *Chasse et Pêche*, September 3, 1899, p. 789.

broad, a little arched, sloping sharply to the tail, which is carried rather low, and showing fine sickles in the male; neck of medium length, carried well forward and not upright, covered with rich-coloured hackle, rather scanty; head lengthy, broad at back; beak long, strong at the base, well curved, of a light horn colour; face bright red; eye large, red-brown; comb small, single, carried well over beak and neck, not very deeply serrated; wattles small and well rounded; earlobes medium size, almond shape, smooth and pure white; wing long, tightly carried; thighs stout and very short; shanks medium, stout in bone, clean, and blue-grey in colour; toes four in number, long and strong, with sharp nails. Weight: males, 4 to 5 pounds; females, $3\frac{1}{2}$ to $4\frac{1}{2}$ pounds. The ground colour of the male is black, but spotted on breast and underparts with rich golden bay; tail black with bright green reflections; the head, neck-hackle, saddle-hackle, and wing-bow, rich reddish-brown, except that the neck-hackle has black spots; the back and outer wing feathers are lighter brown, and on each wing are two greenish-black bars. The hens are dark in body colour, with golden-bay markings, except the wings, which are the same as in the cock so far as primaries, secondaries and bar are concerned.

MOEVEN.

NOMENCLATURE: *German*, Ostfriesische Möven; *French*, Frise Oriental.
VARIETIES: Gold, Silver.
CLASSIFICATION: Non-sitting.
COLOUR OF FLESH AND SKIN: White.
COLOUR OF LEGS AND FEET: Slate-blue.
COLOUR OF EGG-SHELLS: White.

Origin.—This race owns the same ancestry as the Braekel and Campine, with which it is practically identical, but being bred in the districts of Germany near to the borders of Belgium and Holland, it has received separate classification. It apparently stands between the two races named, and is not quite so fine in body as the Campine, nor yet so large as the Braekel.

History as to the Moeven is silent. All the evidence we have been able to obtain is that it has dominated the district named for a long time, but has only obtained attention from breeders during recent years.

Economic Qualities.—Exceedingly prolific layers of somewhat small eggs, in which respect they have not been improved as have the related races in Belgium. Otherwise all we have said as to the Campine and Braekel can be equally applied to the Moeven, which is hardy, very active, and precocious.

Description.—Body small, short, prominent in breast; back broad, well sloping to tail; neck medium in length and carried well up, abundantly covered with hackle; head medium in size, round and narrow; beak short, slightly curved, flesh-coloured; comb small, single, well serrated, and long; face red and clean; eye large, dark brown; wattles almost round, of medium size; earlobes small, obliquely round, pure white; wings long, carried well up; tail carried well back, full sickles in cock; thighs short; legs medium in length, clean, fine in bone, slate-blue in colour; toes four, fine, not long. Weight: males, 4 to 5 pounds; females, $3\frac{1}{2}$ to $4\frac{1}{2}$ pounds.

Varieties—GOLD.—In the cock the breast, underparts, hackles, back, wings, and thighs, golden bay, except that the outer feathers of wings are edged with black, and there is a slight wing-bar; tail black with metallic green reflections. The hen has a golden-bay neck-hackle and pale breast, but the rest of the body is golden bay pencilled with black.

SILVER.—Here the ground colour is silver-white in both sexes, marked with black, as in the Gold variety.

BEARDED THURINGIAN.

NOMENCLATURE: *German*, Thüringer Pausbäckchen; *English*, Bearded Thuringian *French*, Barbue de Thuringe; *Dutch*, Thüringer Baardhoen; *Spanish*, Turingias Barbadas.
VARIETIES: Gold, Silver, Black, White, Blue, Yellow, Cuckoo, Chamois.
CLASSIFICATION: Egg Production.
COLOUR OF FLESH AND SKIN: White.
COLOUR OF LEGS AND FEET: Slate-blue.
COLOUR OF EGG-SHELLS: White.

Origin.—Upon this question very little information is available—none, in fact, of a direct nature. It is suggested that it is descended from the Owl-bearded Dutch, which has a measure of justification from the fact of a similarity of certain characteristics, more especially in the head and beard. But the name indicates that it is bred in the district of Thuringia, in Central Germany, and we lack evidence of breeds passing to any extent from North to South, although there is no reason why that should not be the case. The trend, however, is rather in the other direction. Bearded fowls are well known in Russia and in Eastern Europe, and we should be disposed to the view that these birds originally passed from the east by way of mid-Germany to the district which gives it the name recorded above. That is a matter of pure conjecture, for bearded races are widely distributed. We have no knowledge as to the common fowls found in Central and Eastern Germany, and it is possible that a further examination would afford an explanation. All suggestions as to the origin of the Bearded Thuringians at present are doubtful, and we must so leave the question for more complete inquiry.

History.—From the number of varieties it may be assumed that this race has been bred for a considerable period. That their racial characters are well fixed is evident. They have however, been bred chiefly for

their economic qualities, and only within recent years has careful selection taken place. They are now great favourites, and have been described as 'the pets of German fanciers,' and they certainly warrant the attention of breeders. We have never seen them out of Germany.

Economic Qualities.—As is the case with all the German races with which we are acquainted, these fowls are specially kept for egg production, as there does not appear to be a breed of fowls in the Fatherland which is strong in meat qualities. Our observations have extended from the extreme north to the south, and we have never seen a second, much less a first class table fowl, either in the markets or on the tables of the hotels. The Bearded Thuringians are fair layers; the eggs are small and pure white in colour of shell. They are very hardy and excellent foragers.

Description.—Of medium size, upright in carriage, light and active, with a compact form; body of medium length, with full, well-rounded breast, and full development of stern; neck shortish, arched, and carried backwards, well covered with hackle; head small, with round skull; comb small and short, fine in texture, round behind, and with short spikes; wattles very small, partially hidden by the beard; eyes full, light colour, pupil edged with reddish-brown; beak short, strong at the base, slightly curved, horn-coloured; beard full from back of head and under the beak, covering the lower part of the face, the head being embedded in it; earlobes red or bluish-white, but hidden by the beard; wings medium in size, and carried well up; back short and broad; tail in the male very full and broad, with long sickles, carried low, and plenty of saddle-hackle; thighs short and close-feathered; legs of medium length, clean, slate-blue; toes four in number, fine and well spread, whitish toenails; the plumage is tight. Weight: males, 5 to 6 pounds; females, 4 to 5 pounds.

Varieties.—It would be an interesting inquiry as to the reason why so many German breeds are spotted or spangled in plumage. In the absence of any other satisfactory explanation, we can only assume that in a country where enemies abound the protective influence has given prominence to these races.

Gold.—In the male the hackles, back, and wings are of a rich golden-red, but on the wings are two black bars; the breast and sides of abdomen are chestnut, each feather having a black point or spangle; the beard, front of neck, and tail, are black with a bright green sheen. The hen, excepting the beard, which is black, and the wings, has a ground colour of golden-brown, each feather tipped with black.

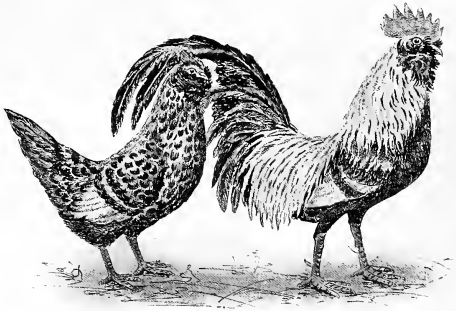


Fig. 55.—Silver Thuringians.
(*After Kramer.*)

Silver (Fig. 55).—The ground colour is silver-white, with black spangles, as in the Gold variety.

Black.—The entire plumage has a metallic green-black lustre, and the beak and legs are somewhat darker than in the Gold and Silver varieties.

White.—Pure white plumage, white beard, shanks pale slate, inclined to flesh colour.

Blue.—Ground colour steel blue, with hackles of a lustrous blue-black in the cock, tail dark blue; hen light slate blue.

YELLOW.—Yellow all over body of both sexes, with a ight beard of the same colour.

CUCKOO.—Pale greyish blue, barred with dark blue on each feather, except beard and tail in male.

CHAMOIS.—The ground colour is light buff, spotted on body with black, as in the Gold and Silver.

It will be evident from the above that this race presents many features of considerable interest to breeders, and varies considerably from any breed with which we are familiar in England and America.

GERMAN CREEPER.

NOMENCLATURE: *German*, Krüper; *English*, Creeper; *French*, Courtes Pattes; *Flemish*, Kruyper; *Dutch*, Kruiper, or Bolstaart.
VARIETIES: Several.
CLASSIFICATION: Uncertain.
COLOUR OF FLESH AND SKIN: White.
COLOUR OF LEGS AND FEET: Slate-blue.
COLOUR OF EGG-SHELLS: White.

Origin.—Short-legged breeds of poultry are to be met with in several countries, and are probably most common in France and the Netherlands. In Holland and Belgium some of the native races are also seen with abbreviated lower limbs. Why and how this peculiar feature has been perpetuated it is difficult to trace, but we are inclined to the view that the shortness of leg is a natural variation which has been fixed by selection, and that probably the Dutch or Flemish are chiefly responsible for it, and that the Krüper is a decendant of birds exported thence into Germany.

History.—Comparatively few of these birds are bred, and chiefly as a question of rarity. They are seen in the yards of amateurs especially.

Economic Qualities.—The hens are excellent layers of large white-shelled eggs, and in flesh qualities they are regarded as very good, fattening well. They are very tame, and hens are specially suited as pets to be kept in gardens. They are moderate in vigour, and should not be permitted to wander in long and damp grass, as they easily take cold.

Description.—In body the Krüper is very long and cylindrical, almost duck-like, owing to the shortness of legs; the back is long and somewhat sunken; neck short, rounded, carried well forward; head of medium size, somewhat elongated; beak strong, slightly curved, dark horn colour; eyes dark red, with black pupil; comb single, medium in size, long, well serrated; ear-lobes perfectly round, small, and white; wings long and broad; tail fully developed, broad, ornamented in the male with broad but slightly curved sickles; thighs very short and strong, as are the shanks, which are clean and slate-blue in colour; toes four, well spread, whitish toenails.

Varieties.—There are several varieties—namely, Black, White, Partridge, and Cuckoo. The best known are Blacks, which have a metallic green sheen.

AUGSBURG.

In Bavaria of late years a good deal of attention has been paid to poultry, and a breed introduced under the above name for utility purposes. With it, however, we have no personal acquaintance. It is said to be due to a cross between the Leghorn and La Flèche, combining good egg-production with excellent table qualities, and is very hardy, as might be expected In type it follows the La Flèche, though smaller and not so massive, but retains the length of leg seen in that breed. The plumage is entirely black, with brilliant greenish lustre, and the legs are very dark—almost black. The comb is horned, as in the La Flèche.

CHAPTER XI

OTHER EUROPEAN RACES OF FOWLS

Polish, or Padoue
Russian Races:
- Orloff
- Pavloff
- Russian-Dutch
- Siberian Feather Footed
- Ushanki

Russian Races (*continued*):
- Russian Crested
- Russian Rose Comb

Hungarian Races:
- Magyar
- Transylvanian Naked Necks

Danish Landhen

POLISH, OR PADOUE.

NOMENCLATURE: *English*, Polish; *French*, Padoue; *German*, Paduaner; *Dutch*, Padua; *Danish*, Paduanere; *Italian*, Padovana; *Spanish*, Padua; *Hungarian*, Paduai.
VARIETIES: Gold, Silver, White, Chamois, Buff.
CLASSIFICATION: Non-sitting.
COLOUR OF FLESH AND SKIN: Greyish-white.
COLOUR OF LEGS AND FEET: Slate-blue.
COLOUR OF EGG-SHELLS: White.

IN England, and Anglo-Saxon countries generally, a name has been given to this race which is, to say the least, misleading, and how it came to be applied is difficult to trace. Until a visit paid to Russia, we regarded it as entirely of Western or Southern European extraction, having no connection whatever with Poland or with the Empire of Russia, in which country portions of the old Polish Kingdom have been incorporated. As afterwards explained, this opinion was modified. It may be that at one time, in the seventeenth or the early part of last century, specimens were imported from Eastern Europe, either direct or viâ Hamburgh, said to have come from Poland, and hence the term Polish was given. A hundred years ago, as shown in Moubray's 'Practical Treatise,' the Crested Dutch were called 'Poland,' but in Dickson's work, published in 1838, the name Paduan-Polish was applied to all the large-crested varieties. By the middle of last century the last term was general, and when Wiugfied and Johnson's 'Poultry Book' was issued in 1853, it was adopted alone, and has so continued. Many explanations have been put forward for the use of both 'Poland' and 'Polish.' It has been suggested that the title is derived entirely from the crest or head-covering, which in some districts is called a 'poll.' Compare, anyone having a thick and heavy crop of hair, he is told that he has a 'big poll.' Thus it is not improbable that what was a local colloquialism has graduated into the present name. Thus, if called 'Polls,' then 'Polled,' afterwards 'Poland,' and, finally, 'Polish.' As stated above, on the Continent the other than the Crested Dutch are named Padoue.

Origin.—An attempt to trace the descent of the Polish fowl is attended with many difficulties, which have not diminished as a result of fuller inquiry. Aldrovandi, a Bolognese gentleman, who died in 1605, in one of his works describes the Padua or Patavinian fowl of his day as follows: 'There are kinds of Gallinaceous birds, larger than ours, which are commonly called Patavinians. . . . The cock is exceedingly beautiful, being richly decorated with five colours—viz., black, white, green, red, and ochre; the body black, the neck covered with white feathers, and the wings and tail partly black and partly green; the tail of the same hue, but the roots of the feathers whitish, and some of the flight feathers also white. The eyes are surrounded by red circles, the comb is very small, the bill and feet yellow, and the head is adorned with a beautiful crest. In the hen there is no white except the white pellicle at the opening of the ears. She is altogether of a greenish-black colour, with yellow feet, and a very small comb, slightly tinged with red.' This description by the old writer was accompanied by illustrations of a cock and hen, reproduced in Tegetmeier's 'Poultry Book,'* from which the above trans-

* 'The Poultry Book,' by W. B. Tegetmeier, F.Z.S. (London, 1873), p. 205.

lation is quoted; and the plate shows more affinity with the present-day Polish than the description. It is a striking fact, in view of the evidence produced below from Italian sources, that Willughby, commenting on this description, says that Aldrovandi describes a Paduan cock and hen which ought rather to be called a Polverara, from a village near Padua, where they are found; but they differ in no part from the common fowl, except in being larger and finer.* The Polverara fowl is known in Italy to-day, and has already been described.

Coming to later writers, we find that Charles Darwin † classifies all the races with top-knots under the term 'Crested or Polish breed,' but does not offer any evidence as to their origin, which he evidently regarded as common. As sub-breeds he includes the Sultan, Ptarmigan, Ghoondook, Creve, Horned fowl, Houdan, and Guelderland, or Breda, some of which owe their crested character to Polish blood, but in others it is very doubtful if such is the case. French writers are very uncertain in their views, although some classify the Crested Dutch and the Polish as one race, whilst others recognise their distinctive differences. Among the latter is M. Cornevin, who points out the variations as a reason for regarding them as separate breeds. As to the latter he says: ‡ 'The origin of the Padoue is as uncertain and obscure as that of the Dutch, which they much resemble. At first the origin was probably common, but some special characteristics show a different conclusion. There are those who regard the Padoue as a sub-race of the Dutch, but if we look into these two groups there are no more reasons for making them one than two.' As we have already indicated, it is more than probable that at first, which would be several centuries ago, they had the same ancestry, but that fact does not determine their present position. Some evidence is obtainable from Italy, for in a little work by the Marquis Trevisani, who has given careful study to Italian poultry, we find it is stated, speaking of the Polverara:§ 'The Polverara is indigenous to the province of Padua, which, for the production of eggs and poultry, is one of the most important of Italian provinces. It is impossible to say whether it is the Polverara which has produced the Polish, classified by Darwin as a separate breed, or whether the Polverara is the product of the Polish.' But here a difficulty arises. At the Exhibition of the Italian Poultry Society, held at Rome, April, 1903, were classes provided for what were called Padovana, which were simply Polish or Padoue, and when it is remembered that in some of the Italian works on poultry the Polverara are called 'Padovana Polverara,' it is evident that the relationship is regarded as pretty close. All the evidence points thus far in the direction of an Italian parentage for the Polish, were it not for what we saw in Russia in 1899. The breed referred to—namely, the Pavloff—is dealt with when treating upon Eastern European races, but there are marked indications that here is an influence which cannot be ignored. The 'Pavloff,' as it is called, is very varied in the crest formation, as can be seen from the description, and has in many cases feathered legs; but there are marked resemblances with the Polish type. In the absence of information as to the races of poultry to be met with in Central and Northern Asia no definite conclusion can be formed, but Hehn, speaking of the domestic fowl, says * that 'they may have come straight from Asia to the kindred nations of the South Russian steppes and the eastern slopes of the Carpathian Mountains, whose religion agreed with that of the other Iranian races, and some of whom already practised agriculture in the time of Herodotus.' What may be regarded as probable is that the Polish, or Padoue fowl, is a descendant of the Polverara, and that both have come from the Pavloff, or a kindred breed, but that the Crested Dutch has also been influenced by the races to be met with in Russia. All, however, is uncertain, and we have no actual evidence in one direction or another. As an indication that there was a stream of fowls from East to West of the type named, it may be mentioned that the name Hamburgh was given in the eighteenth century and the earlier part of the last century to crested fowls, as shown in the 'Natural History of Birds,' by R. Brookes, M.D., published in 1763, in which he says: 'It has a rosy comb, but that does not reach half-way on the head, the hinder part covered with dark-coloured feathers,' and in Rees's 'Cyclopædia' (1820) is a plate of so-called Hamburghs which would pass, but for the fact that they are clean-legged, for the Pavloff we saw in Russia. Further, Mr. R. P. Brent, using the same name, says: 'Hamburghs come from Germany, many coming direct from Hamburgh, from which circumstance they derive their name. They are tufted like the Pole, but the tuft is smaller, does not come so forward, and, consequently, leaves the eyes more exposed, and is fronted by a small comb of curious shape, generally consisting of a very small double comb, terminating in two sprouts or horns.'† In Russia is a breed called 'Russian-Dutch,' very like the 'Crested Dutch,' and a clean-legged crested variety. Hence the indications are that the original habitat of all these varieties was Eastern Europe or Western Asia, but how and when they passed to Italy cannot be traced at present, and the question must be left for further observation.

* 'Domestic Poultry,' by Martin Doyle (London, 1854), pp. 98-99.

† 'Animals and Plants under Domestication,' by Charles Darwin, F.R.S. (Ed. 1885), pp. 249-251.

‡ 'Les Oiseaux de Basse-Cour,' par Ch. Cornevin (Paris, 1895), pp. 200-204.

§ 'Pollivoltura,' dei Marchese G. Trevisani (Milan, 1900), p. 32.

* 'Wanderings of Plants and Animals,' by Victor Hehn (London, 1885), p. 247.

† *Cottage Gardener*, 1852, vol. viii., p. 343.

History.—What is called the Padoue—that is, the Polish—has been known in France for a long period, and it is bred more in that country than elsewhere. In the United Kingdom and America it is essentially an exhibition fowl. In Italy and Russia the races which appear to be its relatives are kept to a considerable extent for practical purposes. From what we have learnt previously, the Polish had a large share in the formation of the Crested French races, and we believe that its qualities can be utilized to an even greater extent in the formation of new breeds.

Economic Qualities.—Polish hens are exceedingly good layers of large-sized, white-shelled eggs, and they sit very rarely as a general rule, with the exception of the Chamois variety, according to M. Jacque, who says:* 'The Chamois Padoue presents this peculiarity that some hens are good sitters.' It is noteworthy, however, that this breed are not early layers, which is to be expected from their susceptibility to cold, and are slow in growth of feathers—a sign of weak constitution. The flesh is well-placed on the breast, and, though not very abundant, is excellent in quality and very fine in flavour. The chickens are somewhat difficult to rear, as they need special care when casting their first down. That is more so when they are bred entirely in confinement, for we have known cases where very little trouble was taken and the results were surprisingly satisfactory; but the birds were treated in a common-sense fashion, and hardened from the first. With adult hens coddling is generally resorted to in order to keep the plumage in good condition, and they have to be provided with special fountains, to prevent the crests getting wet. They are, in fact, birds of feather, and it cannot be questioned that there is no handsomer fowl than the Polish when in good form.

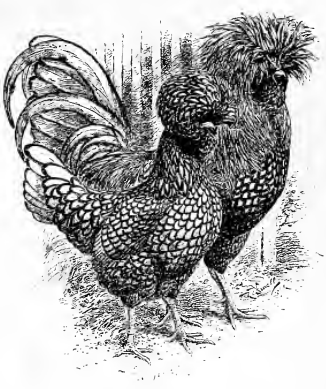


Fig. 56.—Silver Polish Fowls.

Description.—Before describing the general appearance of Polish fowls, we note a peculiarity in the skull, found equally in Crested Dutch, which sharply defines these races from others—namely, a bony tuberosity on the forepart of the skull. At one time this was thought to be caused by disease, but, as pointed out by Mr. Tegetmeier:* 'The crest in both sexes arises from a globular tuber, situated on the forepart of the skull; an intimate connection exists between the size of the swelling and that of the crest. In all cases where the swelling is not largely developed, there cannot exist a good crest. . . . The young, when first hatched, show the prominence most distinctly, each little chick running about with a head that looks as if half a marble had been thrust under the skin of the skull; and by the size of the tuberosity, even at this early age, the birds can be selected that will have the best developed crests.'

In body the Polish is long and deep, with shoulders standing well up; the back is flat and also long; breast prominent, and wings large; the neck is long, broad where it joins the body and narrowing towards the head, which is of medium size and completely covered by the crest. The crest in the male is bred as large as possible, smooth and high in front, and whilst there should be no actual division or parting, the long narrow feathers of which it is composed fall all around, but in the female the crest is globular, as the feathers do not hang at all. The eye is bright and full, but cannot usually be seen, and the earlobe, which is bluish-white, is also hidden; the beak is dark blue or horn colour; the comb, if any is present, consists of two small horns. The distinctive difference between the Crested Dutch and the Polish is that the former have wattles, whilst in the latter these are absent, and the place is taken by a very full beard, or muffs, extending right over the face on both sides and over the throat; the legs are long, fine in bone, and clean, and four toes on each foot; the tail is full, and in the male well spread and furnished with long sickles, but not carried high. Weight: males, 5½ to 6½ pounds; females, 4 to 5 pounds. The general appearance is of a tall, graceful, slightly-built bird, with a pleasing carriage, active and alert, and when that is so the crest does not detract from the uniformity.

* 'Le Poulailler,' par Ch. Jacque (Paris, 1892), p. 225.

* 'The Poultry Book,' by W. B. Tegetmeier, F.Z.S. (London, 1873), pp. 208 and 211.

Varieties—GOLD.—In this variety the ground colour is golden bay. All the feathers on the body and the tail are laced or edged with a narrow band of deep black, excepting the back, saddle, and primary feathers of the wings, which have black spangles at the ends; the hackles are golden bay, tipped with black, and the crest is black at the roots, golden-bay in the centre, and tipped with black at the extremities; the legs and feet are dark blue.

SILVER (Fig. 56).—In this variety the markings are exactly the same as described above, but the ground-colour is silver-white.

WHITE.—Not many of these are met with, but excellent specimens are often seen at Continental exhibitions, and the effect is very pleasing, as the whole of the plumage is of a bluish-white.

CHAMOIS.—Here is a ground colour of buff, except that in the hens it is lighter than in the cocks, but there is none of the black marking, the place being taken by silver-white, which gives the effect of white lacing and spangling. Mr. Tegetmeier explains this by saying:* 'It is a singular circumstance that when a variation of colour takes place in the plumage of birds the change from black to white appears to be much more easily effected than from any other colour to white. Thus, when black-red and white Game fowls are crossed Piles are produced, in which the black disappears, but the red of the saddle and hackle remains. By crossing a Golden-spangled and White Polish, these Spangled Buffs or Chamois Polish are produced, in which the black spangle of the golden bird is changed into the white spangle of the Buff, the ground colour remaining almost unchanged.

BUFF.—In this case the entire plumage is buff, without any white or black markings.

Russian Races of Fowls.

Orloff	Ushanki
Pavloff	Russian Crested
Russian-Dutch	Russian Rose-comb
Siberian Feather-footed	

Until recently very little has been known as to the races of fowls to be met with in European Russia, and our knowledge is still very limited indeed. Older poultry-books speak of Russian or Varna fowls, but there is no direct evidence to connect such breeds with the country. For instance, Dickson thus speaks of what he calls the Russian or Siberian fowl:†

'This breed seems to differ chiefly from others in having considerable tufts of brown or dark, loose feathers springing from each jaw, and others, longer or fuller, from the lower mandible, like a Jew's beard. In the hen there is an upright tuft, spreading out from the hind-head, of the same silky texture. Independent of these, the cock has the usual comb and wattles, and the hen a small comb likewise. This sort is said to have come from Moscow, and varies in colour, one variety being white, with the ends of the feathers glossy blue or black, giving it a spotted appearance, and the legs being covered with fibrous or downy feathers. Another has the plumage of the Game fowl—a fine, tawny orange, spotted with black. This sort is much esteemed in Scotland for prolific laying.'

It is seen later that there are several points of resemblance between the fowl described above—now unknown in Scotland—and those found at the present time in Russia, and, in spite of the doubts expressed by writers upon the supposed source, we are disposed to think that they must have originated in that country, between which and North Britain commercial relationships have been constantly maintained for a long period. Miss Watts,* speaking of the Russian fowl, stated that 'at the Royal Dublin Society's Show, April, 1846, some specimens were exhibited by Mr. Nolan. It appears that they are sometimes gold and silver spangled, resembling the Spangled Hamburghs,' by which is meant the crested birds called by that name at one period. But further information as to these birds is given below.

As to the general character of Russian poultry, we quote from an interesting report upon the Russian races of domestic poultry presented by M. Houdekow to the International Congress held at St. Petersburg in May, 1899, in which he says:†

'The domestic fowls of which we cannot define the breed are very widely distributed in Russia; they are very mixed, the result of crossing species of the most diversified character coming into the country from Europe or Asia. These birds are, as a rule, small and poor layers, their external characters without end, to the extent that it is very difficult to find in the same nest birds of the same type, having identical qualities either in appearance or economic properties. Nevertheless, we can notice between them some points of resemblance, depending, without doubt, upon local conditions, soil, and food. Under the influence of these factors, nearly always unfavourable to fixity of type, our domestic fowls surprise us by their wildness, coarseness of body, and fighting qualities. We can call them half domestic and half wild. Taking into consideration the low degree of development in which we find Russian aviculture, from the point of view of the breeder's art, it would appear difficult to find any local races well known and of individual character; but the contrary is the case: we have breeds of fowls and geese well established. The origin of these breeds is unknown, and as they are not to be met with in the rest of Europe, or in America, or in Asia, we may call

* 'The Poultry Book,' by W. B. Tegetmeier, F.Z.S. (London, 1873), p. 221.

† 'Poultry,' by Walter B. Dickson (London, 1838), pp. 21-22.

* 'The Poultry Yard,' by Miss E. Watts (London, 1854 [about]), p. 85.

† *Travaux du Congrès International d'Aviculture*, 1899 (St. Petersburg, 1901), pp. 1-2.

them Russian, because from the most remote times they have been bred in Russia, where we find them in their purity, with typical qualities and characteristics.'

Probably further and more careful observations will reveal other breeds than those named above, for poultry-breeding is in its infancy in that country.

ORLOFF.

Nomenclature: Orloff.
Varieties: Red, Speckled, White.
Classification: Table.
Colour of Flesh and Skin: Yellow.
Colour of Legs and Feet: Yellow.
Colour of Egg-shells: Brown.

Origin.—That this breed has been bred for a long period in Russia is undoubted, and it is surprising that it had never been heard of by English or Western European breeders prior to 1899, when we visited the International Exhibition at St. Petersburg. Nothing definite is known as to it. M. Houdekow thus speaks of its origin:*

'The Orloff fowl has received this name by reason of the fact that it is supposed that Count Orloff-Techesmensky imported the breed; that is not probable, because it was known already to Russian amateurs before his day. We have found a description in a work of an unknown author, published in 1774, where it is named, not Orloff, but "Chlianskaia." Amateurs, however, knew the breed under that name much later. In our days it is usual, without any reason, to call these fowls Orloff. The most general supposition is that specimens were imported by our celebrated horse-breeder, Count Orloff-Techesmensky, from Persia, and principally from the province of Ghilan. But he did not himself give them the name. We may ask if there exist any races of domestic poultry yet unknown in Central Asia. That country has been explored to a very limited extent in many of the different parts, and it is not improbable that we may have many surprises in reserve there. In fact, this breed has a definite character, and may not have originated in Russia. But the Russians have first made known to Europe and America the remarkable fowl Orloff.'

Our opinion is that probably the Orloff owns the same ancestry as the Malay.

History.—All that is known as to the history of the Orloff is given above. We are informed that birds of this type are to be met with in mid-Russia, but they have not generally been bred with much care, and the supply of pure stock is small. As previously stated, we first saw the Orloffs at the St. Petersburg Exhibition in 1899, where were several excellent specimens. After considerable difficulty, we secured a Speckled cock and two hens, but, unfortunately, the hens died soon after their arrival in this country, and we were unable to obtain any more. We have not heard of any Western breeder being more fortunate. How far the Orloff is receiving the attention of Russian breeders is not known, but it would be a distinct loss if a race with such striking characteristics was not preserved.

Economic Qualities.—Upon this point very little direct evidence is obtainable, but it is generally acknowledged that the hens are poor layers, which is indicated by the structure of the body. The development of the breast is considerable, but the meat is hard, and the bone is very heavy; consequently, it may be assumed that it is slow in growth, and—like our Indian Game—more valuable for crossing with soft-fleshed races to improve the meat qualities than when pure. It is said to be very hardy, capable of withstanding the rigours of the Russian climate; but there has probably been a large amount of in-breeding with a view to fixing the type and colour.

Description.—The following description is taken from the standard issued by the Russian Poultry Society: Head medium in size, but very wide in the forehead; beak short and curved at the base; eye bright amber-coloured, and with prominent eyebrows; comb like a raspberry cut lengthwise, covered with small points, and carried close to the head; wattles small in the males, none in females; beard and whiskers well developed and full, especially in the hen; earlobes very small in cock, and not seen in the hen; neck rather long, carried proudly, and well covered with hackles, but narrowing at the base of the neck and carried close to the body; body short, compact, and very wide; back short, wide, and flat; wings moderate in size, and carried well up; tail medium, carried erect, and in the male ornamented with narrow sickles of moderate length; legs rather long and very stout, the shanks being bright yellow in colour, but absolutely clean; toes four in number and well spread.

M. Houdekow says that the best models of this race are of a large size; in general the adult cocks weigh about 9 pounds, but in some cases 11 pounds or more; the hens about 2 pounds less. In appearance the Orloff is a tall, powerfully-built fowl, capable of defending itself to the extreme. The male we imported refused to associate with other birds after the death of his hens, although he was retained for two seasons.

Varieties.—Of the three varieties the Red is said to be most rare, and the Speckled most general.

Red.—These are of a dark reddish-brown, like mahogany, very even in colour, but brighter in the hackle. The effect is very striking, and we have never

* *Travaux du Congrès International d'Aviculture*, 1899 (St. Petersburg, 1901), p. 4.

seen fowls with so brilliant a plumage, as it shines like satin in the male. The hens are rather sombre, but have the same coloration, except that lighter tints are found in the centre of each feather.

SPECKLED.—These are what may be termed black-red in colour, having black breasts and tails, speckled with white, like our Spangled Game, which they resemble greatly in plumage, except that the body colour of the hens is darker.

WHITE.—The entire plumage is pure white, with a brilliancy of sheen which we have seldom seen equalled.

PAVLOFF.

NOMENCLATURE: Pavloff.
VARIETIES: Gold, Silver, Blue, Black.
CLASSIFICATION: Egg Production.
COLOUR OF FLESH AND SKIN: Cream.
COLOUR OF LEGS AND FEET: Slate-blue, but in some cases Yellow.
COLOUR OF EGG-SHELLS: White.

This breed must not be confounded with the Cosaque, which is sometimes met with in France, and which is evidently related to the Owl-bearded Dutch; but from the description it would appear to be the same as the Russian, or Siberian, or Varna fowls described in older poultry books, as already indicated. Our first acquaintance with it was at the St. Petersburg Exhibition of 1899, where were a large number of specimens, varying greatly in their secondary characteristics, but all evidently of the same race. The opinion held in Russia is that they are closely related to the Polish, or Padoue, and we are unable to come to any other conclusion than that the last-named breed has descended from the Pavloff, but when and how it is impossible to trace. The one difficulty which presents itself in the acceptance of this theory is the peculiar conformation of the skull of the Polish, which, so far as we are aware, is not present in the Pavloff. But it is a well-known fact that external developments lead to changes in the structure of the body, and breeding for excessive size of crest through long generations would doubtless cause enlargement of the skull and produce the cranial tuberosity referred to, even though that might not be present in the fowls retaining the original type. In this connection it is essential to remember that the distribution of fowls has been from East to West, and that even hundreds of years ago intercommunication between the various countries was fairly constant. Within our own experience it is realizable how the introduction of a new race into a country, even in comparatively small numbers, may be followed within a few years by its wide extension and the displacement of existing breeds. As an instance may be mentioned the Leghorns in America, for the many million members of that family are descended from the few birds imported from Italy about forty years ago.

Origin.—Upon this point there is very little information—in fact, nothing at all reliable. M. Houdekow states that * 'these fowls are so novel and have so fixed a type in their different characters as to give them the right of being accorded a distinct race. They have received the name "Pavlovsk" because they have been bred principally in Pavlovsk, at the Government (or Department) of Nijni-Novgorod, where, it is said, they were imported by the Empress Catharine II.' Whence they were imported is not suggested, but from the description of the Siberian Feather-footed fowls we should imagine that both probably came from Northern Asia. They are, however, widely spread in Russia, and are to be met with on the Russian-German border country—that is, the ancient kingdom of Poland.

History.—Until recently the breeding of poultry was not at all systematic in Russia, and selection for purity of race practically unknown. All that we have been able to learn is that fowls of this type are generally bred in many districts, and that the race is common over a wide area. Under these circumstances it says much for the prepotency of the special characters that they are to be found to so great an extent.

Economic Qualities.—The Pavloff fowl is chiefly regarded for egg production, as it is said to be good in that respect, although not equal to other races in which the quality has been developed by breeding and selection. So far as we are aware there are no records as to actual production, and from information received very few hens would reach 100 eggs per annum; but that it is capable of great improvement in this respect is certain. It is chiefly a spring and summer layer, and the eggs, which are white in colour of shell, are small in size, as, in fact, are all Russian eggs. The breed is very moderate in flesh qualities, but the chickens are quick growers, and very hardy.

Description.—The body is short and wide, with a broad, straight back; neck short, slightly arched, and well covered with hackle; head round, and beak nearly straight, horn-coloured, with prominent nostrils; eye full, nearly black; the comb consists of two fine horns, carried well forward; crest good size, in cocks composed of narrow upright feathers, in hens round. Of the specimens at St. Petersburg there were great differences in the crests. In some cases the feathers stood upright on the head; in others there was a transverse line on top of the head, part of the feathers falling back and others forward, with well-defined division; in the third form the feathers formed a fringe in front, a few standing up behind; and a fourth had the main part of the feathers falling back like a lady's veil; wattles only in cocks, and small; beard and whiskers very thick, covering the

* *Travaux du Congrès International d'Aviculture*, 1899 (St. Petersburg, 1901), pp. 4-5.

carlobes, a large portion of the throat and face; tail large, full, carried upright, and with long and broad sickles; legs short, and with the toes well feathered. Weight: males, 4 to 5 pounds; females, 3 to 4 pounds.

Varieties.—Although there is a great divergence in the Pavloff fowls, and coloration of plumage is very variable, the varieties named below are those generally accepted as pure, the others being a result of indiscriminate breeding. An exception is in the White-crested, evidently a cross with the Crested Dutch, from which they differ in that they are heavily bearded.

GOLD.—In these the ground colour is golden-bay, as in Gold Polish, with black spangles, but the specimens we saw were by no means evenly marked.

SILVER.—Here the ground colour is silver-white, with spangles as in the Golds.

BLUE AND BLACK.—Evidently sports from the above, and are not often seen.

RUSSIAN-DUTCH.

NOMENCLATURE: Russo-Hollandaise.
VARIETY: One.
CLASSIFICATION: Egg Production.
COLOUR OF FLESH AND SKIN: White.
COLOUR OF LEGS AND FEET: White.
COLOUR OF EGG-SHELLS: White.

Origin.—As will be seen from the description given below, these fowls are evidently descended from what we call Hamburghs—that is, the pencilled variety of which were named formerly 'Dutch everlasting-layers.' In Russia itself the source is recognised, and such differences as may be noted can be attributed to different climatic conditions and to less careful methods of breeding.

History.—It is claimed that this breed has been known in Russia for a long period of time, as stated by M. Houdekow:* 'It is a very ancient race, which was already in existence at the time of Tsar Alexis Mikhailovitch,† from the evidence of historical documents of that period.' And he adds that 'they are called Dutch because, without doubt, they were imported in the first instance from Holland; nevertheless, it is not difficult to see that some peculiarities have an Asiatic origin.' These fowls are bred only to a very limited extent, and are chiefly in the hands of amateurs.

Economic Qualities.—The Russian-Dutch are medium in size of body, and are stated to be prolific egg-producers. They are distinctly above the average of Russian fowls for table qualities, and are fairly supplied with flesh, which is white and of good quality. No evidence has been given as to their vigour, and we should be inclined to the view that they are not hardy.

* *Travaux du Congrès International d'Aviculture*, 1899 (St. Petersburg, 1901), pp. 5-6.
† A.D. 1645-1676.

Description.—Head small, rather long; beak long, stout, slightly curved, white with light horn-coloured points; eye red; comb flat on top, firmly placed on the head, and well covered with small points; face smooth and red; carlobes and wattles small and red; neck long, carried erect, scantily feathered; back wide at shoulders, narrowing to the tail, slightly rounded; breast full and prominent, and round; body stout and long; wings medium in size, and carried close to body; tail moderate in size, compact, rather inclined backward, in cocks fully furnished with long, narrow sickles; legs and shanks long and stout, free from feathers, and white in colour; toes four in number; the plumage is bright and glossy, not very thick, and in cocks is dark red marked with black, in hens chestnut. Weight: males, 7 pounds; females, 5½ pounds.*

With the following breeds we have no personal acquaintance, and quote descriptions issued by the Russian Poultry Society, as it is stated that they are the best-known varieties of the domestic fowl in that country, by which is evidently meant that birds of these types are to be met with in different districts. During our visit to that country we did not see any, or if so did not recognise them as having individual characteristics.

SIBERIAN FEATHER FOOTED.

Description.—Head large; beak short and stout; eye full and red; comb rose, small, and moderately developed; crest: behind the comb is a small mass of feathers, which stand up well from the head; face red, but bordered with bushy whiskers, which entirely cover the small carlobes: there is also a thick beard under the lower mandible; wattles small in the cocks, and rudimentary in the hens; neck short, stout, slightly arched, and well covered with hackles; back wide, flat, and almost straight; breast wide and full, carried fairly forward, but not prominent; wings large and powerful; tail large, full, carried wide: in cocks the tail-coverts are abundant, and the sickles long and well curved; legs of medium length, well feathered with thick, short quills, right up to thighs, from which grow hard vulture hocks; the plumage is generally white, whilst others have cuckoo plumage. Weight: males, about 6 pounds; females, 4 to 4½ pounds.

From the appearance, with the exception of the whiskers and beard, here is a race largely Asiatic in type, in affinity with the breeds introduced in the earlier part of last century. If, as has been suggested, the Siberian Feather-footed fowl is of ancient lineage, it may be the progenitor of several of the modern Russian races, and also of the fowls we have seen in South-Eastern Europe. As our information is so scanty, at present it is impossible to form a satis-

* Standard issued by Russian Poultry Society.

factory opinion upon that question, and a further exploration of Siberia and Western Asia may reveal races of fowls as yet unknown to us, and solve problems which at present are difficult, if not impossible of solution.

USHANKI.

Description.—Head large, round, with broad forehead; beak moderate, slightly curved; eye full, bright, and red; face red, but hidden almost entirely by the beard; comb single, well developed, regularly serrated, carried straight and erect; earlobes very small indeed, entirely hidden by whiskers; wattles red in colour, small in males, and rudimentary in females; beard and whiskers well developed, more especially in the hens, very full and bushy; neck short, nicely arched, but carried backward, in males the neck-hackle thick, and falling well over the shoulders; back wide, flat, and straight; breast prominent, carried well forward, broad, well rounded; wings long and wide, and carried somewhat low; tail large, nicely expanded, inclined backwards, and the males have long, well-curved sickles; legs short and stout, but perfectly clear of feathers; colour generally black, but sometimes Silvers, Reds, and other colours are met with; the plumage is close and tight. Weight: males, 6 pounds; females, 4 pounds.

In this case we have a race which appears to possess distinctive characters, and to be clearly defined from all the other types of Russian fowls. With the exception of the whiskers and beard it stands alone, although in some respects an affinity with the Orloff is indicated. Without, however, further information, or seeing any of these birds, it is impossible to classify them. The fact of their being clean-legged is suggestive, and we should not be surprised to find that they emanate from the same districts as the Orloffs, and that they are connected, more or less remotely, with that breed. This is pure conjecture, which might have to be revised in the light of wider knowledge.

RUSSIAN CRESTED.

Description.—Head rather long, of conical form, with a straight beak, slightly curved at the end; eye red; face smooth and red; comb small, generally single and upright, serrated only to a slight extent; earlobes and wattles red in colour, and well developed; crest inclined backward, much fuller in development in the hens, consisting of long hackle-like feathers hanging over the back of the head: in the cocks the crest partakes of the character of a broad ribbon; neck short, slightly arched, inclined backward, in the males abundantly covered with long hackles, which fall over the shoulders; back wide, flat, and straight; breast full and wide; body long, deep, and wide; wings large, strong, and carried somewhat low; tail large, full, well spread, carried high, and in the males supplied with large and long sickles, which are well curved; legs short, and with the feet entirely clear of feathers; the plumage is very thick and abundant; colours vary greatly, having no fixity. Weight: males, 6 pounds; females, 4 pounds.

It will be evident that this is a race different from any named before, and the absence of whiskers and beard is suggestive, in that these features may be accepted as indicative of racial affinity, which would also be true in the case of leg feathering. The peculiar crest may be due to a chance cross, or show some remote connection with the Pavloff. Further observations may prove that the Russian Crested is deserving of a separate position, and we should think that if carefully bred the race would evolve more distinctive characters. At the present time it apparently does not receive much attention, probably due to the fact that in Russia as yet the selection of fowls for utility purposes is in its infancy, and that attention is devoted to a very few native and foreign breeds.

RUSSIAN ROSE-COMB.

Description.—Head large; beak of medium size and short; eye red; face clean and red; earlobes and wattles moderately developed; comb square and rose-shaped, of a medium size, with a pointed spike behind, the top flat and covered with small points, as in the Hamburgh; neck moderate in length, thickly covered with hackles; back wide, flat, and straight; breast full in front and broad; body stout, wide, and of medium length; wings large, strong, and carried rather low; tail large, full, slightly expanded, and in the males well furnished with sickles, which are long and perfectly curved, and provided with an abundant supply of coverts; legs short, and with the feet entirely free from feathers; there are several colours, none of which appear to be definitely fixed. Weight: males, 6 pounds; females, 4 pounds.

It will be seen that this breed more nearly approximates to the Hamburgh, from which it is probably a sport; but the Russians have not yet adopted that definiteness of description which is necessary in order to discriminate between the different races. That, however, will be remedied as time goes on, and the secondary characters are more clearly defined by breeding to standards. In a country where there has been little attempt to adopt the principles of artificial selection such a condition of affairs must always be looked for at first. Within the next few years we may expect a great change in that respect.

Hungarian Races of Fowls.

Magyar Naked Necks

In a country which is so diversified as Hungary in physical features it might be expected that there would be considerable variation in the types of animals

and birds. It is not improbable that with more careful study of the common fowls such variations might be met with, unless it is too late, due to the importation of foreign breeds, chiefly the Buff Orpington, for the improvement of the economic properties, as a result of that great movement now in progress for the development of the poultry industry in Hungary. At present, however, those named above are alone given a distinctive position.

MAGYAR.

NOMENCLATURE: *English*, *Hungarian*, Magyar; *German*, Ungarische Landhühner; *Dutch*, Magyaar; *Spanish*, Magiar.
VARIETIES: Black, Red, Yellow, White, Speckled.
CLASSIFICATION: Egg Production.
COLOUR OF FLESH AND SKIN: Yellow, except in Whites.
COLOUR OF LEGS AND FEET: Yellow, except in Whites.
COLOUR OF EGG-SHELLS: White.

Origin.—In the absence of definite records as to the origin of the Magyar races of fowls, which are largely bred in the great valley of, and plain bordering, the Danube River, and having paid two visits to that country, we have no hesitation in attributing to Italian influence the type of bird known as the Magyar. The differences between the Leghorn and the Magyar are very small indeed, only what might be expected where fowls are bred for a considerable period of time under two sets of conditions—not nearly so great as between the English and Italian members of the same family. As we have already endeavoured to explain, political and national movements, wars of conquest, and commercial intercourse, have had much to do with the distribution of animals over the earth. Centuries ago the Roman legions penetrated as far east as Hungary, and at a later period a large part of the Italian Peninsula was subject to the Austrian Crown. Even now the countries are contiguous, and it is not long ago that the great stream of commerce was from the Adriatic ports to Austro-Hungary. Hence the same stream of influence which can be traced from Italy by the Mediterranean to Spain, across the Alps to Southern France and Germany, and reaching right down the Rhine Valley, may be found to have passed across the Styrian Alps into Austria, and through the valleys of Croatia and Slavonia to the land of the Magyars. The interesting point in this connection is that Hungary appears to be the limit of the Italian races on that side, for when we pass the Lower Danube we find another type, more following the Asiatic races on the one hand, and the South Russian breeds on the other. We have no hesitation in attributing the origin of the Magyars to Italian fowls, as they have all the type which is characteristic of the latter, and follow them closely in economic qualities.

History.—Until recent years comparatively little attention was paid to the scientific breeding of poultry in Hungary, but the realization of the fact that poultry means profit where the races and methods are satisfactory led to study of the native breeds, with a view to improvement of type and economic qualities. As profit depends upon productiveness beyond the actual cost of maintenance, selection is essential to success. Hence careful observation has been made as to the Magyar races and definite standards adopted. Probably these may lead to modifications, but it is desirable that the general character should be maintained.

Economic Qualities.—The Magyar fowl is essentially an egg-producer, thus following on the same lines as the Leghorn, which it so closely resembles. The result of inquiries has shown that it is prolific, often producing 150 eggs per annum, which will be increased as careful selection is made. In that respect, however, there are very great differences to be found. Very little attempt has been made to induce winter laying by the Magyar breeds, and they are chiefly profitable in spring and summer. The eggs are small, as in Italy, and uniformly white in shell. The hens, with the exception of Whites, are poor sitters and mothers, so much so that they may be termed non-sitters, as only a small percentage show the maternal instinct, and are not very reliable. The chickens are very precocious, hardy, and quick in growth, and at an early age fair in flesh, but, like all the Italians, when older are poor in table properties. These fowls are hardy, splendid foragers, and able to obtain the greater part of their food, and when accustomed will sleep in the open during the severest winter. They are very lively and alert, and are clever at finding food even when it is very scarce. Few insects are left where these fowls are kept. The flesh is scanty, yet fine in flavour; they are small in bone, and can be fed up well, but the flesh is yellow in colour.

Description.—In general character, as already explained, the Magyar follows closely the Italian or Leghorn character, but with one exception, the White, is not so round in body. The body is small, compact, and broad, and upright in carriage; the neck and legs are of medium length, the former well curved; the head is long, surmounted by a single comb, much smaller than in English and American Leghorns, and varying much in shape, as in some cases it is short and carried well off the head at the back, whilst in others it is low. With increase of egg production the tendency will be for the combs to become larger. As a rule the earlobes are red, but we have seen cases where white was very apparent: that, however, is unnatural; beak short, and ivory-white; wings short and strong; the tail is carried high, especially in the cock; legs are strong, but fine in bone; all except Whites have yellow flesh and legs, but an attempt is being made to breed that variety, and also the yellow, with white flesh and legs, which

cannot but be regarded as a mistake. There are four toes on each foot. Weight: males, 4 to 5 pounds; females, 3½ to 4½ pounds.

Varieties.—Whilst the general type of the Magyar races is very uniform, there are more variations than is usually found in a breed, doubtless due to absence of careful breeding and selection.

Black.—These are entirely black in the plumage, and have dark-coloured legs, in which latter respect they follow the Black Italians we have seen in their native land. They are said to be good layers and hardy, but have not received much attention, owing to the colour of the feathers, as light plumage is preferred. They are decidedly narrow in body.

Red.—Here is practically the Brown Leghorn, having the same plumage and bright yellow legs. They have red earlobes, and but for that difference might be regarded as Brown Leghorns. They are great favourites by reason of their prolificacy and vigour of constitution, and are extensively kept. Our impression is that the Reds and Whites have received the greatest amount of attention, as they are certainly the best from the breeder's point of view.

Yellow.—These vary very considerably; in some cases the colour is even all over the body, but in others with white marking almost like Piles, from which fact we assume that they are a variation from the Browns. They have yellow legs and flesh and red earlobes, and are very similar to the Yellows which we first saw in Denmark nearly twenty years ago. An attempt is being made to make the legs white.

White (Fig. 57).—In this variety the bone is small, and the body rounder than in the above, indicating a cross with a heavier breed. The legs are white, and the hens are said to be good sitters and mothers, from which fact we regard them as the least pure of all the Magyar races. What influence has been introduced appears to be unknown. They are pleasing in appearance, and not unlike small White Minorcas.

Speckled.—Here the plumage is very similar to that of the Silver-grey Dorking, except that the body is speckled with white. The body is larger than in the other varieties, and has certainly more distinctive character. The legs are yellow and the earlobes red.

Fig. 57.—White Magyar Cock.

TRANSYLVANIAN NAKED NECKS.

Nomenclature: *English*, Naked Necks; *French*, Cou Nu de Transylvanie; *German*, Nackthalse; *Spanish*, Cuello desnudo de Transilvania; *Hungarian*, Erdelyi Kopasz Nyaku.
Varieties: White, Coloured.
Classification: Egg Production.
Colour of Flesh and Skin: Greyish-white.
Colour of Legs and Feet: Leaden-grey.
Colour of Egg-shells: White.

Origin.—This fowl is said to have been produced in Eastern Hungary, but no evidence is forthcoming as to the causes which have led to its peculiar features. We have seen specimens in several districts of Mid and Eastern Europe, showing that they are strong in prepotency.

History. — The first examples were seen in England about thirty years ago, but, whilst bred by those who desire rare or peculiar breeds, they are not, so far as we are aware, kept for practical purposes.

Economic Qualities.—In Eastern Europe the Naked Necks are regarded as the most vigorous of all poultry, and never appear to have suffered from any form of disease; the hens are excellent layers, commencing production early and laying right through the winter; the chickens are precocious, and the flesh excellent in quality; they are splendid foragers, needing no food during the greater part of the year. In size they are medium, adult cocks weighing 5½ to 6 pounds; hens, 4 to 5 pounds.

Description.—The body is short, well rounded, and fully developed; legs and neck rather long; head medium size, with a single comb, and wattles moderate in length; tail full in cock, and carried horizontally; wings long and strong for flying; thighs short; toes four. The great peculiarity is that the head and neck, for about 3 inches, are entirely denuded of feathers, except that on the lower part of the neck there is a small collar of feathers; the comb, wattles, face, and neck are bright red.

Varieties.—As stated above, there are two varieties, of which the White is most common, and in this the contrast between skin of neck and body plumage is very striking. The Coloured vary considerably, many being largely red.

DANISH LANDHEN.

NOMENCLATURE: *Danish*, Landhön.
VARIETY: One.
CLASSIFICATION: Egg Production.
COLOUR OF FLESH AND SKIN: White.
COLOUR OF LEGS AND FEET: Dark grey.
COLOUR OF EGG-SHELLS: White.

Origin.—The common type of fowl met with at one time in Denmark was that generally found in Northern Europe, and evidently a direct descendant of the *G. Bankiva*. It was kept under natural conditions, and very little attention was paid to it, as fowls were formerly regarded as of small importance.

History.—Until 1875 this fowl was universal in Denmark, but the introduction of the Italian races displaced it, as they were more profitable, laying larger eggs. Recently, however, efforts have been put forward for securing a measure of fixity and improving it by selection, which have proved successful. The signs are that it will be regarded with a greater amount of favour.

Economic Qualities.—The Landhen s a small-bodied fowl, lacking in flesh qualities, moderate as a layer, especially in winter, and producing small-sized eggs, but very hardy, and the chickens precocious. By selection it has considerably improved both in the number and size of eggs. They are excellent foragers and small eaters.

Description.—The body is short and broad, both in breast and stern; back sloping well to tail; wings small and carried well up; neck medium length, very thick; head of medium size, with strong beak, dark in colour; comb single, upright, moderate in size, with four to six serrations, well over the neck, but not curved; wattles good size and rounded; earlobe white; legs stout and short, dark grey in colour; tail full in cock, with large sickles; colour of breast, wings, and tail, black; back dark red; neck-hackles bright red in cock; in hen, breast salmon, back brown with dark markings, neck-hackle straw with dark markings. Weight: males, 4 to 4½ pounds; females, 3 to 3½ pounds.

CHAPTER XII

AMERICAN RACES OF FOWLS

Dominique
Plymouth Rock
Wyandotte
Rhode Island Red

WHILST the Western Hemisphere has given us the turkey and one race of ducks, it owes the fowl to Europe, from which the early settlers obtained specimens soon after they had fixed their habitations in the New World. Probably the first importations were of Game fowls, which by their pugnacious nature would be specially capable of self-defence, and fall in with the humour of the pioneers. As to that, however, we have very little information. But the development of poultry-breeding as we now know it would scarcely be found until the question of food-supply became pressing, and men were fixed in their habitations. For a considerable period, as in Europe, little attention was paid to breeds, but in the first half of last century attempts were made to secure types specially adapted to American conditions, and to introduce races unknown in the Old Country. It has previously been seen that the Shanghai and the Leghorn, or Italian fowl, were transported direct from Asia and Europe respectively to America, and were unknown in Britain until they had been bred for several years across the Atlantic. These, however, were not enough, and ere long special breeds were produced, built upon lines suitable to the climate and conditions, and meeting the ideals of breeders. Briefly stated, they largely followed the Asiatic type—that is, large in body, hardy, with yellow skin and legs, and layers of tinted-shelled eggs, but clean in the leg and more active in habit of body than the Cochin and the Brahma. American ideals have differed distinctly from European, in that for table purposes yellow flesh and skin are preferred, whilst we regard as finer in flavour the white-fleshed races. Such a fact should be kept in view when considering those breeds to which the name 'American' is given. That these have proved most valuable additions to our stock is unquestionable, and their wide distribution and universal recognition is a great tribute to American breeders, who have ever kept prominently forward the general economic qualities and not exaggerated special points to the extent met with in Britain. Whether that will be so in the future remains to be seen, for present signs are in the direction of an exaltation of fancy points, which would be regrettable.

DOMINIQUE.

NOMENCLATURE: *English*, *French*, *Dutch*, Dominique; *German*, Dominikaner; *Danish*, Dominikanere; *Spanish*, Dominicana.
VARIETY: One.
CLASSIFICATION: General Purpose.
COLOUR OF FLESH AND SKIN: Yellow.
COLOUR OF LEGS: Yellow.
COLOUR OF EGG-SHELLS: Tinted.

This breed is not much found in America at the present time, consequent upon the fact that its place has been taken by the Plymouth Rock, in the production of which it had considerable influence. Our notes respecting it will therefore be brief.

Origin.—We have been unable to discover any definite evidence as to the origin of the Dominique. In one work* it is stated that 'this old-fashioned breed is said to have been brought over by the early Puritans,' but no proof in support of the statement is given.

History.—Specimens of the Dominique appear to have been bred for a long time, and as much as 100 years is named. Prior to the introduction of the Plymouth Rock it was steadily increasing in favour in New England, but from that time onwards the number kept has decreased, and although it is still included in the Standard issued by the American Poultry Association, few specimens are met with.

Economic Qualities.—They are said to be very hardy, are good layers, and make reliable sitters and mothers; for table purposes the flesh is fairly well distributed, and has the yellowish tinge preferred on the American market.

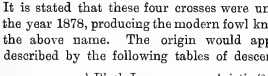
* 'Profits in Poultry' (New York, 1886), p. 172.

Description.—The body is broad and deep, and the breast full, standing upon strong legs of medium length; the neck is of medium length, well arched, and covered with an abundant hackle; the head is medium in size, surmounted by a large rose comb, firmly placed, square in front, well covered with small spikes on top, and terminating in a spike behind, the point turning slightly upwards; the comb, face, wattles, and earlobes are bright red, the eye bright bay; the body colour of plumage is greyish-white, each feather regularly crossed with parallel bars of blue-black; the legs and feet are yellow. Weight: males, $7\frac{1}{2}$ to $8\frac{1}{2}$ pounds; females, $5\frac{1}{2}$ to $6\frac{1}{2}$ pounds.

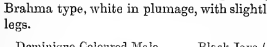
PLYMOUTH ROCK.

NOMENCLATURE: The term 'Plymouth Rock' is adopted in all countries.
VARIETIES: Barred, White, Black, Buff.
CLASSIFICATION: General Purpose.
COLOUR OF FLESH AND SKIN: Yellow.
COLOUR OF LEGS: Yellow.
COLOUR OF EGG-SHELLS: Brown.

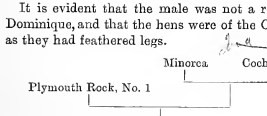
Origin.—It is commonly accepted that the Plymouth Rock as known to-day originated in a cross between the American Dominique and the Black Cochin or Java, for in regard to the latter it would appear that the term 'Java' was applied equally to the Cochin. But later investigations indicate that the influences were much wider, and that four lines of breeding were followed. If that is correct, and there is much weight behind the statement, we have an explanation of the great variations of type which have marked the breed. It is stated that these four crosses were united about the year 1878, producing the modern fowl known under the above name. The origin would appear to be described by the following tables of descent:



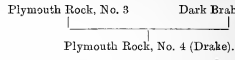
The White Brahmas, or Birmingham Whites, as they are called by Mr. I. K. Felch, were probably birds of a Brahma type, white in plumage, with slightly feathered legs.



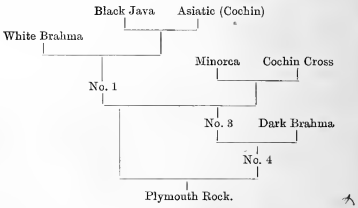
It is evident that the male was not a rose-combed Dominique, and that the hens were of the Cochin type, as they had feathered legs.



In this case we might expect that the single comb would be clearly defined, and, whilst retaining the shape of body and colour of legs and flesh of the Cochin, there would be a tendency to barred marking in the plumage.

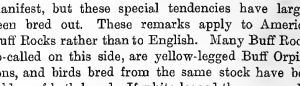


The colour and type was finally fixed by in-breeding members of the last-named family and the introduction of Rock No. 1, thus producing the famous Essex strain, which from 1878 onwards carried all before them, as shown in the full table of descent.



The above remarks apply to the Barred variety, from which the Whites and the Blacks are sports, but which—the former especially—have been improved by careful selection.

Buffs have no relationship with the Barred Rocks, as they do not descend from them. But the plasticity of the domestic fowl is here shown by the way in which these birds, without a trace of the Rock blood, have been moulded to Rock character. From records available it is evident that the Leghorn, Cochin, and Brahma have all been employed, and the following table will show the descent:



At first the Leghorn and Cochin influence was very manifest, but these special tendencies have largely been bred out. These remarks apply to American Buff Rocks rather than to English. Many Buff Rocks, so-called on this side, are yellow-legged Buff Orpingtons, and birds bred from the same stock have been sold as of both breeds. If white-legged they were called Buff Orpingtons; if yellow-legged, Buff Rocks. A large proportion of English Buff Rocks have originated in this manner. One strain of American Buff Rocks is largely composed of single-comb Rhode Island Reds.

They have been bred to Rock type, and by careful selection and breeding for fine buff colour have become Buff Plymouth Rocks in shape and general character.

History.—A fowl to which the name Plymouth Rock was given was introduced about 1849 by Dr. J. C. Bennett, and was composed of Cochin, Dorking, Malay, and Wild Indian blood, but it soon passed into oblivion. The present stock have no relationship or connection with it. The first specimens of No. 1 type, as above, were exhibited by Mr. D. A. Upham, of Wilsonville, Connecticut, at Worcester, Massachusetts, in 1869. They were originated by a Mr. Joseph Spaulding, of Putnam, Connecticut. Much interest was manifested in them, and led to the steps which ultimated in the Essex strain nine years later. From the first they caught on both with exhibitors and practical poultry-keepers. Something must be allowed for the fact that the breed was an undoubted American production. It is not too much to say that the great development of the poultry industry in America owed much to this breed. The Whites were introduced about 1880, and the Buffs were admitted to the Standard in 1893.

Barred Rocks were introduced into Britain in 1879, and they speedily won a widespread popularity. For some years at exhibitions classes of Rocks were by far the largest, and competition was very keen indeed. The rewards of successful breeding were great, as high prices were realized for first-class specimens. Breeders had no easy task, as the difficulty of securing first-class specimens was enormous, due to the great diversity of the progeny. As one breeder stated nearly twenty years ago, he did not expect to obtain more than 2 or 3 per cent. of his chickens fit for the show-pen. But it was not only among exhibitors that the breed secured favour. Its undoubted economic qualities caused it to be spread very widely throughout the kingdom and on the Continent, and until the advent of the Buff Orpington its influence was more in evidence as a farmers' fowl than any other. Its position, both for utility and exhibition purposes, has lately been challenged, but it is a fowl which yet retains a high position.

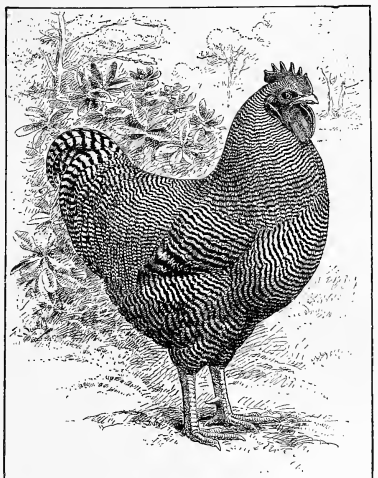


Fig. 58.—Barred Plymouth Rock Cock.
Bred by W. E. Briant, Waltham, Massachusetts, U.S.A.

Economic Qualities.—Much of the popularity of the Plymouth Rock has been due to their vigour of constitution and adaptability to almost all conditions. Whilst they are essentially farmers' fowls, by reason of their activity and foraging instincts, and ability to withstand even the more exposed situations, they thrive excellently in confinement. They are large in body, and, as was said to us in their favour soon after their introduction, they both look and carve well where the number of eaters round the table is by no means small. The chickens are quick growers for a General Purpose breed, and can be reared to a killing age in about fifteen weeks, which is much more rapid than is usual with fowls of the same class. In European markets the Plymouth Rock cannot be regarded among high-class poultry, as they are too heavy in bone, and the flesh, whilst well distributed and fairly good in quantity and quality, is yellow, as is the skin. The last-named feature is one great recommendation in America, where broilers are preferred so tinted, and for that trade the Plymouth Rock is largely bred, producing plump birds about 2½ pounds in weight in nine to twelve weeks. Even in Europe it has been proved that the breed fattens well, and that the creamy or orange tinge in the flesh can be greatly minimized if milk is freely used. In what may be termed the second-class markets they occupy a good position, and they have been largely used for crossing purposes. As layers they are decidedly

above the average of the heavier breeds, more especially in winter, and the eggs, which are of a fair size, are deeply-tinted in shell—a great recommendation with both traders and consumers. They make reliable sitters and mothers; in fact, the chief complaint made respecting them is that they are too prone to maternal duties, though we fail to see that this is to be any serious drawback, and it can be altered by selection of eggs for hatching from hens in which the brooding instinct is less highly developed. The tendency to exalt too highly markings in the Barred variety, more especially in hens, is to be deprecated, as that is calculated to weaken the economic qualities.

Description. — The Plymouth Rock is a large, deep-bodied fowl, squarely built, and yet with a compact appearance, due to the absence of leg, foot, and hock feathering; the breast is fairly prominent, medium in length, and well rounded; the back is broad, short, and rising up to the head and tail; the neck is strong and thick, well arched, and thickly covered with hackle; the head is medium in size and length, the face, comb, wattles, and earlobes crimson-red, and the eyes full, with a bright bay iris; the comb is single, small medium in size, straight, and carried upright, with even serrations; the wattles are of smallish size; the thighs are short and wide apart; the legs are stout, strong, and firmly set, and are yellow in colour, as are the feet, with four toes, but entirely free from feathers; the wings are small and carried close, and the tail is small and short, with absence of curved sickle feathers in the cock. The whole appearance of the bird is that of a large, well developed and proportioned fowl, with strong bone and good frame, but compact and close-feathered. Weight: males, 8 to 11 pounds; females, 7 to 10 pounds.

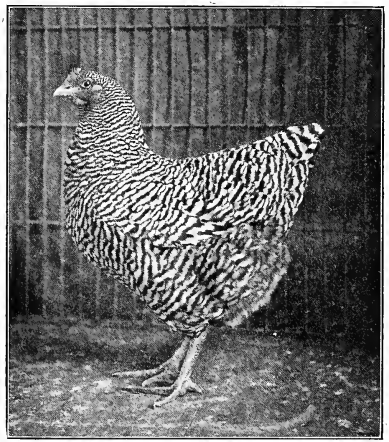


Fig. 59.—Barred Plymouth Rock Pullet.
Bred by G. H. Latham, Lancaster, Massachusetts, U.S.A.

Varieties.—When first introduced there was only one variety, that which is called the Barred Plymouth Rock, but the number has since been largely increased.

Barred (Figs. 58 and 59).—The original type was what is now known as the Barred variety. The meaning of that term (which is an American one) is that the ground colour of the feathers has bars directly across. Such marking is by no means peculiar to Plymouth Rocks, but it differs considerably. When this breed was first introduced the bars were broad and a little indistinct, yet at the same time they gave that cuckoo appearance which is characteristic of the variety, and this form of barring is still maintained in America. Our breeders, however, used to the narrower bars in the marking of such varieties as the Pencilled Hamburghs, have undoubtedly made the bars sharper, and in some way tended to change the plumage of the fowls. Happily, however, there has been a reaction against this extreme change, and it is now recognised that the appearance should be somewhat broad, and breeders will wisely adhere to this class of marking. It must be remembered that the Plymouth Rock is not what is commonly called a pencilled fowl. One peculiarity in the breed is that the marking is, or should be, the same all over the body in both sexes. It is here where the difficulty is met with in breeding.

The tendency in all varieties of poultry, more especially in the males, is towards variation; for instance, blackness in the tail, deeper marking in the breast, and to a lesser extent upon the back, whilst wings and the hackles generally have an inclination towards lighter marking. To maintain, therefore, the even colour throughout is by no means easy, and in this direction the difficulty of the breeder generally arises. It is certainly a tribute to the influence of skill in selection that so many Plymouth Rocks have been met with even in colour. At the same time, however, it is well to remember that, although not so much so as formerly,

wherever a coloured variety is thus antagonistic to the general tendency there must be a goodly number of inferior specimens so far as the plumage is concerned, which is certainly true in the case of Plymouth Rocks.

Breeders find that the variations are considerable. In some cases the birds come far too light, with either failure of bars or too narrow bars. In other cases they come much too dark from the reverse influence, and Blacks and Whites respectively have been produced in that way. Breeding, however, and careful selection tend to reduce the number of failures so far as colour is concerned. There is another point in which the Plymouth Rock differs distinctly from, say, the Pencilled Hamburgh, namely, that the bar colour runs into the ground colour gradually, and not with the sharpness which is characteristic of pencilling.

With regard to the colour of the plumage, the ground of the feathers (in this country, at any rate) is usually accepted as greyish-white, with the grey very distinctly in evidence. If the ground were pure white the appearance of the bird would be very different from what it is, making the difference between a good-looking fowl and one that is medium in quality. Some of the earlier birds showed the white ground very distinctly; and, of course, there are plenty bred in this country that are now the same, but they have not the pleasing appearance which is given when the colour is greyer. The markings in the English Standard are said to be bluish-black, whereas in the American they are dark blue, and, from what we have seen, the transatlantic fowls have a distinctly greater contrast between the ground and bar colours than in any English varieties; in fact, it is this which largely explains the whiter ground appearance of the American fowls.

There can be no question that since the introduction of the Plymouth Rock into this country it has greatly improved in appearance. At first the specimens were decidedly homely, but with the improvement of colour and evenness of marking the bird has now a striking look, which was not seen in the early days. Whether this improvement in colour has in all cases been for the economic benefit of the breed is questionable. Some breeders disregard all such questions as economics, and in their haste to secure better external characteristics they sacrifice that which is of greater value. We are inclined to think, however, that this has taken place in the Plymouth Rock perhaps less than in most breeds; and it is for that reason that the Rock is yet found one of the most valuable breeds for utility purposes, but, also, from the fact that during the last twenty years it has been more and more impressed upon the minds of breeders that in order to maintain the position of any variety of fowls it is necessary to keep in view economic properties, less harm has been done than might otherwise have been the case.

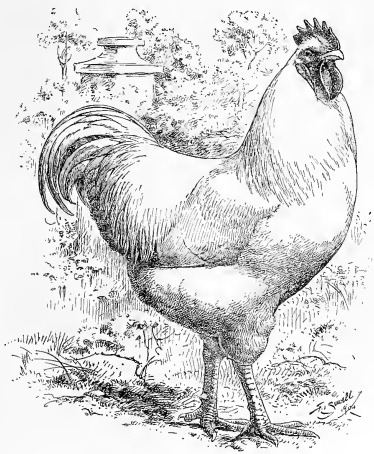


FIG. 60.—WHITE PLYMOUTH ROCK COCK.
Bred by H. W. Graves, Higganum, Connecticut, U.S.A.

WHITE (Fig. 60).—The White Rock has not won any considerable popularity in this country. It is a very strange study, and one which presents difficulties, why certain fowls become great favourites and are widely spread, whilst others which appear to have equal qualities never seem to gain that measure of favour which is so desirable. There are two or three white varieties of fowls which are amongst the most popular, but this is not true of the White Plymouth Rock. This breed is a sport from the Barred variety. It is easily seen that a failure of pigment, so far as the black marks are concerned, would yield white-plumaged fowls, and wherever we have the mixed marking, which is sometimes known by the term 'Cuckoo,' there will occasionally be specimens which either show pure white on the one hand, or are entirely black. It is in this way that many of the

varieties have been secured, and the tendency to variation is very great in every kind of poultry. The White Plymouth Rock has now been bred for nearly twenty years, and may be taken as well fixed. In the early days there was a strong tendency to reversion, and many of the White Plymouth Rocks came with black feathers, more or less numerous, but fewer of these sports are now seen. So far as we can learn, the White Plymouth Rock is quite equal to the Barred in all economic qualities, and the external characters are entirely the same, with the one exception of the plumage. Some of those who breed the White Plymouth Rock have declared it to be one of the best egg-producers of the family. This, however, is merely a matter of opinion, upon which there is no definite testimony. One can quite realize that in a sport there will be a measure of greater vigour than in a perfectly pure variety, because that sport would seem an expression of striving for some more remote type, and thus indicates that certain dormant factors are exerting their influence.

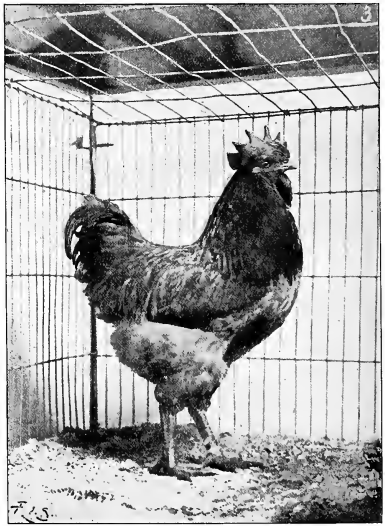


Fig. 61.—Buff Plymouth Rock Cock.
Bred at Coverdale Poultry Farm, Keene, N.H., U.S.A.

Black.—The Black Plymouth Rock is very little met with, and its nearness in type to another breed, which also upon this side is scarcely seen—namely, the Black Java—means there is great probability that in some cases these two varieties have been taken one from the other. We have never yet seen a Black Plymouth Rock whose plumage had that sheen which is so desirable, and in the majority of cases they were a little bit dull in colour.

Buff (Figs. 61 and 62).—With the fad evident during the last few years, both in America and England, it is not surprising that birds with buff-coloured plumage have spread into several varieties, especially those which were likely to become popular. We have, therefore, what is called the Buff Plymouth Rock, though the peculiarity of this is that birds may be Buff Plymouth Rocks or Buff Orpingtons in accordance with the colour of the legs and flesh. This is a very unsatisfactory state of things, but it is none the less true that many breeders say that they find a considerable number of their Buff Orpington chickens come with yellow legs and flesh, and if they have a good colour of plumage they can scarcely be recognised as in any sense different from the Plymouth Rock. Thus the breeder of Buff Orpingtons in whose strain there is a considerable amount of yellow blood has two strings to his bow, and he can sell either one or other race in accordance with the colour of the flesh and legs. In process of time this matter will undoubtedly right itself, but it shows how intermixed breeding undoubtedly is. A true Orpington could hardly be mistaken for a Plymouth Rock, and *vice versâ*, but it is the want of character and of fixity and the exaltation of one or two minor points which lead to this confusion. There are strains of Buff Plymouth Rocks which never produce Buff Orpingtons, and from what we can learn birds that have been bred for a few generations upon the Plymouth Rock type do not produce white-legged birds at all. Hence the danger is not from the introduction of the Plymouth Rock into the Orpington, but from the introduction of the Orpington into the Plymouth Rock. It would appear that the breeding of Buff Plymouth Rocks is more easy than the breeding of Buff Orpingtons, for the reason that the flesh and legs of the former are more in keeping with the plumage than is the case in the latter. There can be no doubt that, as a rule, the colour of the

plumage in the Buff Plymouth Rock is more even and richer than in the other variety. What is chiefly to be avoided is that patchiness or mealiness which more or less characterizes all buff breeds of poultry. Breeders of this variety state that for winter egg production it is one of the best breeds known, and there is considerable truth in this statement. The birds are large and handsome in appearance, and the undoubted infusion of Cochin blood has given a vigour of constitution which is very desirable. It is generally admitted that the colour of the plumage is largely owing to Buff Cochin influence, and those who have studied the different races of poultry will be able to realize this fact. The influence, however, seems to be largely bred out, because there is no very great tendency in the Buff Plymouth Rock towards feathered legs, and we all know that the Buff Cochin has very heavy feathering on the legs and shanks.

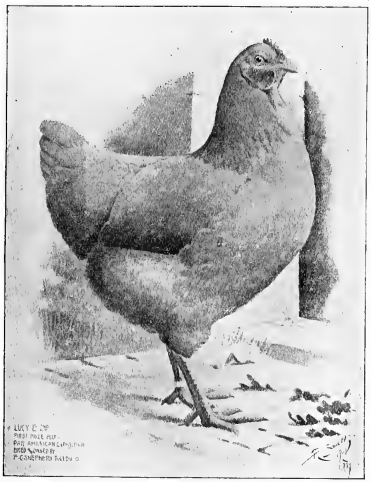


FIG. 62.—BUFF PLYMOUTH ROCK PULLET.
Bred by F. C. Shepherd, Toledo, Ohio, U.S.A.

WYANDOTTE.

NOMENCLATURE: The term 'Wyandotte' is used in all countries.
VARIETIES: Silver, Gold, White, Black, Buff, Partridge, Silver-pencilled, Buff-laced.
CLASSIFICATION: General Purpose.
COLOUR OF FLESH AND SKIN: Pale yellow.
COLOUR OF LEGS: Yellow.
COLOUR OF EGG-SHELLS: Tinted, varying from buff to brown.

The useful properties of the Plymouth Rock, first, as it was, of the purely American varieties to command widespread favour, predisposed poultry-keepers to accept the Wyandotte when introduced about thirty years ago. But its plumage, entirely novel among the larger races, was also a recommendation. At first progress was slow, but afterwards at a greater rate. But for the fact that the eggs produced by the earlier Wyandotte varieties are small we believe it would command a much wider adoption.

Origin.—When first introduced there was only one variety, the Silver, and the primary idea was not in the direction which was attained, but rather to produce an improved Cochin Bantam, to which end a Sebright Bantam was crossed with a Cochin hen. The Bantam idea had to be given up, as there was too much in the way of size to be got rid of, and they were called Sebright Cochins. The following account will describe some of the difficulties to be met with in the evolution of a new breed:*

'It was, without doubt, the intention with the first cross to produce an improved Cochin Bantam, the cross being a Sebright Bantam cock and a Cochin hen. When the size proved too large they were offered and illustrated as Sebright Cochins. This suggested the cross of Silver-spangled Hamburghs with Buff Cochins. These two crosses, mingled with another cross, a half of Buder and Cochin hen, became the blood mixture of the early birds offered to the American Poultry Association as American Sebrights. Their friends could not agree as to the comb being so suggestive of an American Bantam; the request was refused, and the matter referred back to a committee. About the same time a cross of a Silver Hamburgh with a Dark Brahma hen produced a still more desirable type, having pea combs. Mr. Kidder, of Northampton, contended earnestly for this characteristic being accepted as the regulation. But these crosses, while being bred by themselves, presented troublesome features of both feathered and smooth legs, single and rose, also pea and rose, combs. The best birds were called Eurekas. When these two wings, or original crosses, were brought together, more uniform specimens were produced, the Hamburgh blood being in the greater proportion. The combs, in the majority

* 'The Wyandotte Fowl' (Albany, New York, U.S.A., 1884), pp. 5, 6.

of cases, assumed a more rose appearance, though smaller and closer to the head; the feathers disappeared from the legs, yet the golden colour of skin and legs remained. The males, in colour, reverted strongly to Dark Brahma, and the females gave evidence of their Hamburgh ancestry by presenting a laced

From which it will be seen that the Asiatic influence accounts for three-fifths of the breed.

The exact origin of the Golden Wyandotte is difficult to trace, as there is a great lack of direct evidence. Of the earlier specimens it is stated that Silver Wyandottes were crossed with Partridge Cochins, Golden-

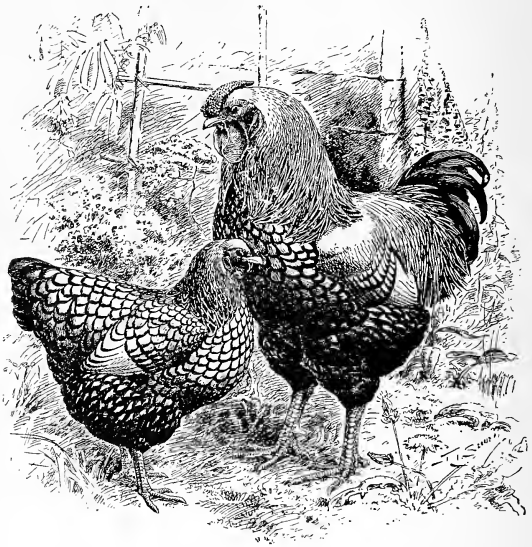
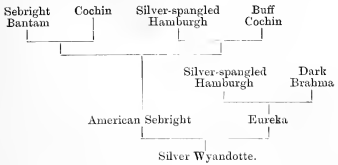
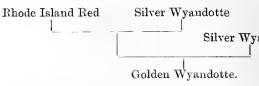


Fig. 63.—Silver Wyandottes.

plumage.' So far as can be traced, the following is the descent of the Silver Wyandotte:



spangled Hamburghs, or Brown Leghorns, but that the most successful strain was evolved as follows:



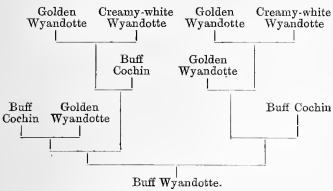
The descent of the Silver Wyandotte is shown in the previous table, and need not be introduced to complicate the above. But we have always felt that the Golden Wyandotte shows signs of other

influences, and that at least Partridge Cochin and Golden-spangled Hamburgh blood are present, though we cannot tabulate them.

White Wyandottes and Black Wyandottes are sports from the Silvers, fixed by careful selection.

In the Golden Wyandotte, and to a lesser extent in the Whites, was found a distinct tendency to buff coloration, but the process of elimination would be slow, and hence alien blood was introduced by means of the Buff Cochin, which explains the inclination to leg feathering frequently met with.

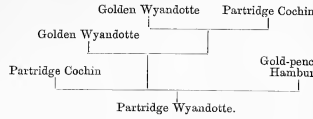
Below we give the table of descent of Buff Wyandottes:



By this it is shown that on the male line of descent first a Buff Cochin cock was mated with a Golden Wyandotte hen; that a Golden Wyandotte cock was mated with a Creamy-white Wyandotte hen, and one of the cockerels produced by this cross was mated with Buff Cochin hens; and that the hens from the latter were mated with a cockerel from the first cross, and from this mating came the cock which was the father of the first Buff Wyandottes. On the female side, first a Golden Wyandotte cock was mated with Creamy-white Wyandotte hens, and the pullets so produced mated with a Golden Wyandotte cock; a cockerel from this mating was crossed with Buff Cochin hens, and the hens obtained became the mothers of the first Buff Wyandottes.

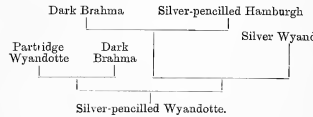
Thus the great-grandsire and great-grandam on the male side were Buff Cochins, and the grandam on the female side also. Whilst the above statement appears to be correct in respect to some strains, it does not apply to all. Mr. A. F. Hunter writes: 'The American Buff Wyandottes are largely from Rhode Island Red stock. It is accepted over here that the Rhode Island Reds were used largely in making both Buff Wyandottes and Plymouth Rocks, and I have been assured by Mr. R. G. Buffington, the well-known judge, that there was little out-crossing to get the buff colour for the earlier Buff Rocks and Wyandottes—that they were nearly pure Rhode Island Reds.'

The Partridge Wyandotte owes its origin both to the Cochin and the Hamburgh, as is seen in the table of descent; in colour it resembles the Partridge Cochin:

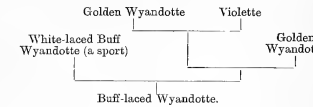


In this case the evidence of evolution is not clear, as the final introduction of Partridge Cochin and of Hamburgh blood respectively is recorded, but without exactness.

Silver-pencilled Wyandottes have been bred with the plumage of the Dark Brahma, a type neglected of late. As a consequence we have the influence of that breed, as seen below:



One of the latest Wyandottes to be introduced is that known as the Buff-laced, pretty for ornamental purposes, but that is all. It has been formed thus:



The Violette is a fowl of which little is known.

History.—At one time the Silver Wyandottes were designated by various names. They have been called Eureka, American Sebright, Hambletonian, Columbia, and Ambright, but finally the term Wyandotte was adopted. The Silvers were brought forward in the seventies of last century, the Golds early in the eighties; the Whites were admitted to the American Standard in 1888, the Buffs and Partridge varieties were introduced about 1894, whilst the Silver-pencilled and the Buff-laced are of later introduction. From the time the Silvers were brought before the American public they commanded a considerable amount of attention, though they did not secure that wide popularity which was anticipated, due, doubtless, to the difficulty in breeding to the recognised type. The Golds have never caught on, and it was not until the advent of the Whites that the breed secured recog-

nition as a valuable utility fowl. The excellent laying and table properties of that variety, combined with the advantage accruing from a one-colour plumage, speedily won for it a leading position, and it now ranks in America as one of the three first fowls, so far as marked by popular favour, amongst practical poultry-keepers.

Silver Wyandottes were first introduced into England in 1881, and they soon began to win their way, chiefly because of their great prolificacy, more especially in winter, when eggs are so valuable. It is true that in point of size of egg there is much to be desired, but something has been done in the way of improvement. The eggs are nicely tinted in shell and of good quality. Still, their position has not been so good as might have been the case otherwise. Neither Silvers or Golds have attained great popularity.

The Whites were introduced in America by Mr. B. N. Briggs in 1885, and they have found a much wider circle of friends. They are extensively bred, more especially where the combination of egg production with meat qualities is desired. Amongst other varieties, the Buffs are the most promising at the present time, and they lay the largest eggs of all members of the breed.

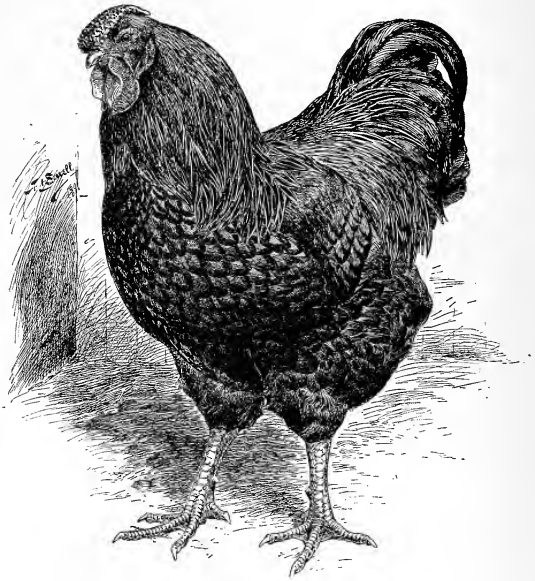


FIG. 64.—GOLDEN WYANDOTTE COCK.
Bred by I. C. Keller, Prospect, Ohio, U.S.A.

Economic Qualities.—The Wyandotte has a strong look, which shows that it is built for work. It is active, an excellent forager, very tame and hardy, thriving well in exposed positions and on the heavier soils. The chickens mature well, and we have had cockerels weighing upwards of 3 pounds when twelve weeks old. The pullets commence laying, if bred at the right seasons of the year, when between five and six months old. Practically, their great value is as

winter egg-producers, in which respect they stand out preeminent. The testimony which comes to us from all parts of the kingdom is that no breed can be relied upon for winter eggs to the same extent, and especially is this true of Golden and Buff Wyandottes. That is a great point in their favour, as the need for increasing our supply of eggs during the colder months of the year must be apparent to everyone. For table purposes colour of flesh varies somewhat. Silvers are good in this respect, the Whites better than either Silver or Golden, but all have yellowish meat. When in lean condition they do not carry much flesh, but we have found them fatten better than was at first thought likely, and the flesh whitens considerably, leaving only a creamy or golden tinge. As sitters and mothers they do not become broody early, but are faithful when engaged in that work. As already indicated, the great drawback to the breed is the small size of egg, which in the case of pullets especially are distinctly below our market requirements. Buffs lay the largest egg of any of the varieties, and the Whites come next, as more attention appears to have been paid to this important point with those varieties—which are yet capable of improvement, however—than with the Silvers or the Golds, for which reason many who kept the latter by reason of the large number of eggs produced have been compelled to give them up. An egg weighing under 2 ounces is unsaleable in the best trade for breakfast purposes. Breeders can do much to improve the size of egg, but it needs persistent selection of the larger-sized eggs for hatching, and the use of hens as breeding stock rather than of pullets. The colour of the shells varies considerably. Buffs, Whites, and Golds give the deepest tints.

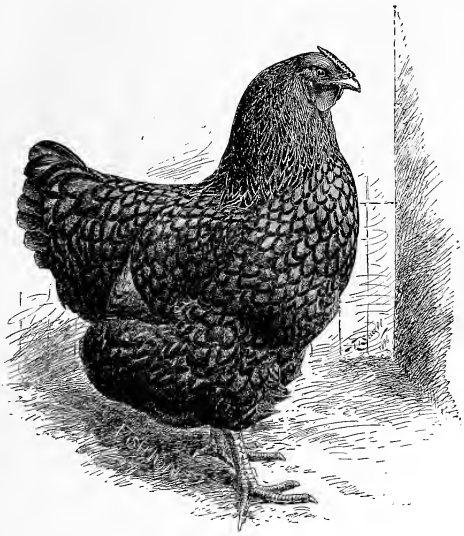


Fig. 65.—Golden Wyandotte Pullet.
Bred by I. C. Keller, Prospect, Ohio, U.S.A.

Upon European markets a yellow-fleshed fowl does not realize nearly so good a price, other things being equal, as one with white flesh. As a case in point, we recently placed upon the market two lots of chickens of

equal weights, and the white-fleshed realized sixpence to ninepence each more than the Wyandottes. In America the reverse is the case, so that it is important to study these questions in relation to local conditions; but with the exception named, that of size of egg, the are moderately tight. There is an indication of the Asiatic origin in the build, but it has not the **Y**-shape suggested by the Brahma, Langshan, and even the Plymouth Rock, inclining, however, to the Brahma type, although the absence of feathers on the legs and feet

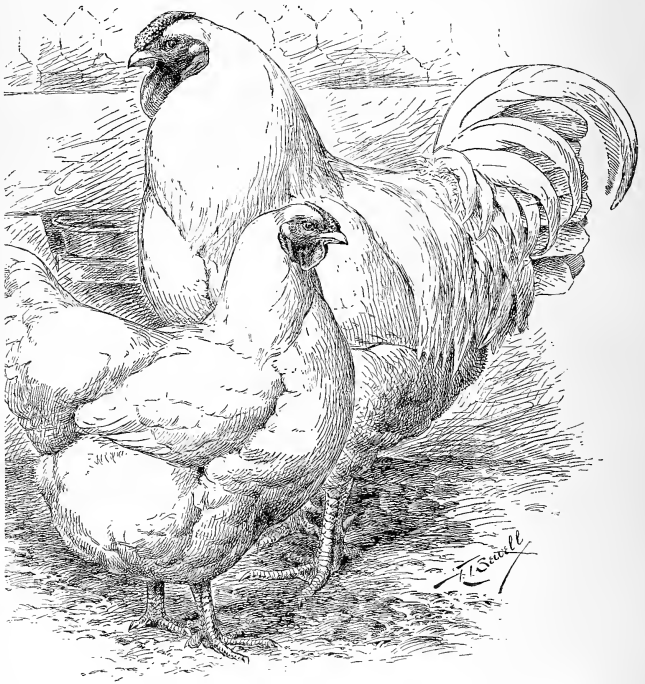


FIG. 66.—WHITE WYANDOTTES.
Bred by Mr. A. F. Hunter, South Natick, Massachusetts, U.S.A.

Wyandotte is one of the most useful practical fowls we now possess.

Description.—In appearance the Wyandotte is short and cobby, compact in body, and the feathers and of hocks gives it a cleaner and more blocky look. It is very well balanced and graceful in carriage. The body is short and square, the back broad and short, with neck rising sharply; the breast is full and well rounded, and the keel, or breast-bone, fairly well defined;

the posterior part of the body is well developed, showing good egg qualities; the wings are small and carried close to the body; the neck is of medium length, fully covered with hackle, and well arched; the head is short and broad, surmounted by a rose comb peculiar to this breed, in that, whilst covered with rather blunt points on top, square in front and tapering behind, it follows the curve of the head, and is not flat. Many of the European Wyandottes are coarse in comb, which stands above the head and is flat on top, but that is not typical; these are coarse in flesh, and should be culled out; the wattles are small; the comb, wattles, face, and earlobes are bright red; the tail is wide and thick, but the sickle feathers in the cock are short; the legs are of medium length, strong, but fine in bone, and the toes are four in number. Weight: males, 6½ to 8 pounds; females, 5½ to 7 pounds.

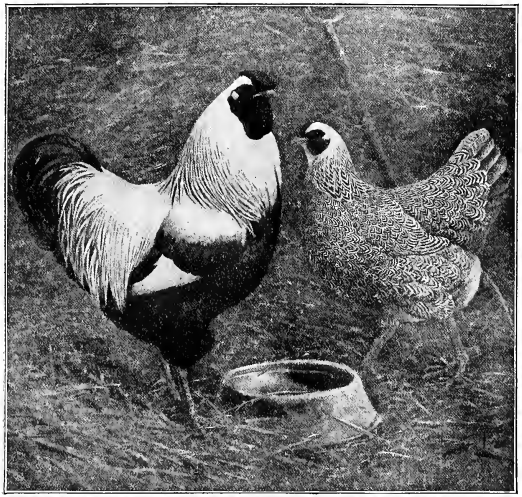


FIG. 67.—SILVER-PENCILLED WYANDOTTES.

Bred by John Wharton, Hawes.

Varieties—SILVER (Fig. 63).—The body colour is silvery-white. In the cock the breast and under-parts have each feather on the outer edge marked with jet-black lacing; in the hen the whole body is marked in the same way. In the cock the head and neck are silvery-white, except that the neck-hackle has a clear black stripe through the centre of each feather; the saddle-hackle marked in the same manner; the back and wing-bow are silvery-white; the tail feathers, coverts, the thighs, and fluff are black. Evenness of marking is the great desideratum, but in that respect a great number of birds fail. The beak is horn colour, the shanks and feet bright yellow, and the eye bright bay.

GOLD (Figs. 64 and 65).—Marking as in the Silver, but the ground colour is of a rich golden-bay. Many of the earlier specimens were dull in the ground colour, which gave them a dowdy or dull appearance, and it is scarcely surprising that the efforts of breeders have been largely to secure greater brightness in the plumage, and so long as economic qualities are not sacrificed such efforts are commendable. As a rule, the lacing is not very even, which is to be expected in fowls with that peculiarity of marking.

WHITE Fig. 66).—The plumage should be pure

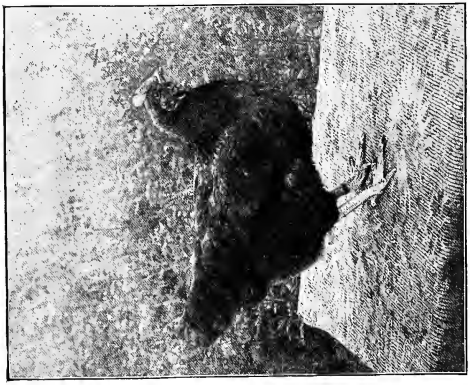


FIG. 68.—SINGLE-COMBED RHODE ISLAND RED PULLET.
Bred by L. W. Bean, South Braintree, Massachusetts, U.S.A.

FIG. 69.—ROSE-COMBED RHODE ISLAND RED COCK.
Bred by P. R. Park, Reading, Massachusetts, U.S.A.

white, without any tendency to straw colour on the one hand or to albinoism on the other. The points chiefly to be avoided are coarseness in comb and a tendency to yellowness in the feathers. The beak is bright yellow. This variety is very handsome, more especially upon grass and among trees.

BLACK.—Very few are seen, and birds are uncertain, as they are apt to have purple bars, especially in the neck-hackle, back, and wings. The beak is dark, and the legs and feet black, shading to willow, but the bottoms of the feet must be yellow.

BUFF.—As with all fowls having buff plumage, the colour question offers many difficulties, as there is always a tendency to unevenness and patchiness. On the one side many birds are reddish (which trait may be attributed to the Rhode Island Red ancestry), and on the other many birds are very pale. Any shade can be accepted so long as it is even, from lemon buff to rich buff. Black in wings and tails is a very common fault, and in many cases the under colour is almost white. Whilst, therefore, it is desirable to secure evenness of tone, care is necessary that the undoubted good qualities of the variety are not sacrificed.

PARTRIDGE.—For richness of colour this variety stands first among the Wyandottes. It is what is generally known as black-red—that is, in the cock the head, neck, back, and wings are rich orange or golden red, the neck-hackle striped with black, and the breast, fluff, and tail glossy metallic black; the beak and toe-nails horn colour, and the legs and feet bright yellow.

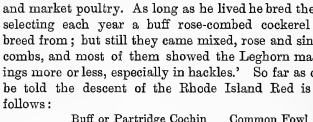
SILVER-PENCILLED (Fig. 67). — In this variety the ground colour is silvery-white, where in the Partridge we find orange or golden red, and the breast, etc., black.

BUFF-LACED.—On the neck and saddle hackle the feathers have a white stripe down the centre, and on the breast and thighs in the cock each feather is laced with well-defined white lines; the under colour and tail are white.

RHODE ISLAND RED.

NOMENCLATURE: *English*, Rhode Island Red; *German*, Rhode Island Rote; *Spanish*, Rhode Island Rojo; *Hungarian*, Rhode Island Barna.
VARIETY Rose-combed, single-combed.
CLASSIFICATION: General Purpose.
COLOUR OF FLESH AND SKIN: Yellow.
COLOUR OF LEGS AND FEET: Yellow or reddish-yellow.
COLOUR OF EGG-SHELLS: Deep brown.

Origin.—This breed was the result of crossing by farmers living on the shores of the Narragansett Bay in New England, who had no idea of producing a new breed, but of securing strong, vigorous, and profitable fowls. Under these circumstances it is difficult to trace the exact origin, but according to an article which appeared in an American journal * it is stated that the basis of the Rhode Island Red was laid about fifty years ago, when some Red (partridge ?) Cochins and Malays were introduced by sea-captains to Westport, Massachusetts, and Little Compton, Rhode Island. The crossing of these on the ordinary fowl of the country, which at that period would appear to have been of a very ordinary character, gave a type of fowl which specially suited the conditions prevailing. Later on further crosses were made with Wyandottes and rose-combed Brown Leghorns, but at what stage it is difficult to say. The breed, however, owes its character to other crosses of the same blood, for Mr. H. S. Babcock, of Providence, Rhode Island, who has taken a great interest in the breed, writes: * 'A Mr. William Tripp, late of Little Compton, had a number of the old-fashioned Malay hens (buff). He got from a neighbour a rose-combed Brown Leghorn cockerel, and put with his Malay hens, and found the cross to be a most excellent one for eggs and market poultry. As long as he lived he bred them, selecting each year a buff rose-combed cockerel to breed from; but still they came mixed, rose and single combs, and most of them showed the Leghorn markings more or less, especially in hackles.' So far as can be told the descent of the Rhode Island Red is as follows:



It is apparent that the Asiatic blood predominates, and that the Malay has had considerable influence, further evidence of which is given below.

History.—The following interesting letter, written by Mr. W. P. Shepherd, of South Swansea, Massachusetts,† is worth reproduction: 'At one of the first exhibitions of the South Massachusetts Poultry Association, Mr. Jenney presented some buff birds for entry, a trio alive and a number dressed, saying that in his judgment they were the coming birds for both eggs and poultry. He was asked what they were called, and replied they had no name. Then someone suggested he should give them one. "Well," said he, "suppose we call them Rhode Island Reds." And so they were entered on the book by that name. That was in 1879 or 1880. . . . Their good qualities induced the poultrymen of Little Compton and Tiverton, Rhode Island, Westport and Dartmouth, Massachusetts, and other towns in the vicinity, to take hold of them and breed them in large quantities.' In the winter of 1891-1892 they were exhibited at Philadelphia under the name of Golden

* *Commercial Poultry* (New York, October 5, 1901), p. 18.

* *Country Gentleman* (Albany, New York, November 26, 1896), p. 911.
† *Ibid.*

Buffs, and as both single and rose-combed birds were bred, it is stated that they were exhibited both as Buff Plymouth Rocks and Buff Wyandottes, into the after-composition of which breeds it is stated that the Rhode Island Red has largely entered. In 1888 a club was formed for the breed, and in 1901 a Standard was adopted by that club. The Rhode Island Red has, up to the present, received a very small amount of attention in Europe.

Economic Qualities.—The breed is very hardy, which quality is greatly in its favour, as it is thus suitable for the more exposed places and where land is heavy. It is said to be fairly quick in reaching maturity, and to make a well-fleshed, meaty fowl; but the flesh is deep yellow, more like that of our Indian Game, as might be expected from its Malay parentage, to which may be attributed the deep tint of the egg-shell, for they are darker than any produced, except by Malay and Indian Game. It is reported to be a good layer, but in the absence of actual records we should imagine that it will not be very prolific, though the Wyandotte and Leghorn blood in its composition may have greatly improved this quality; and as it is a medium-sized fowl we expect it will lay more eggs than if it were 3 or 4 pounds heavier, for we look to the smaller races to be better in this respect. It is an excellent sitter and mother, active, and a good forager. Taking it all round, the Rhode Island Red appears to have great possibilities, and to be worthy the attention of practical poultry-keepers, especially where a desire is manifested to secure greater colour in the shells of eggs, for which purpose it should be of service for direct or indirect crossing. The secretary of the Rhode Island Reds Club says of the breed:

'They make early broilers, excellent soft roasters at four to six months, and the females hatched in the natural season lay at from twenty to twenty-four weeks from hatching. They are very persistent year-round layers, eggs are large, mostly of a good reddish-brown colour, and they maintain this colour throughout the year. A dozen eggs selected for exhibition, no double yolks, weighed 34½ ounces, and by the case they averaged 25 to 28 ounces to the dozen.'

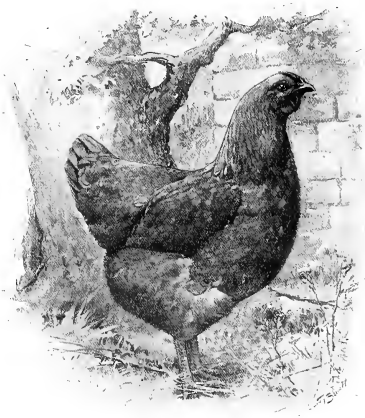


FIG. 70.—ROSE-COMBED RHODE ISLAND RED PULLET.
Bred by P. B. Park, Reading, Massachusetts, U.S.A.

Description.—For several years it was doubtful whether the Rhode Island Red would be recognised as a separate breed. In fact, at one time, as we have seen, specimens were exhibited in the States as Buff Plymouth Rocks and Buff Wyandottes, and the want of a sufficiently distinct type was evident. In 1901 a Standard was adopted, which clearly gives it an individuality of its own. In that Standard it was provided that the shape be distinctly American, by which is meant that it shall conform to the type of the Plymouth Rock and the Wyandotte; but the portraits of existing birds show a good deal of Malay character, especially in the head and neck, as the breast is flatter and the body longer than in either of those breeds, more especially the Wyandotte. The keel is long, and carried well forward; the comb and wattles of medium size, both single and rose being recognised, though there is a strong disposition to prefer the latter; the legs are stout, rather heavy in bone, medium in length, and free from feathers; but until the type is more firmly fixed many of the birds have feathered legs. It is in respect to coloration, however, that the breed holds a special position. The aim is to make it a brilliant red throughout, with the exception of tail and wing flights, which are black. We have no breed which is solid red, and the only one we have met with is the Russian Orloff, of which

one variety is remarkable in this respect. The specimens we met with in Russia in 1899 were brilliant dark red, almost mahogany, and burnished like copper. What has been accomplished in that country is within the power of breeders elsewhere, and would prove a great acquisition to our races of domestic poultry; the tail is low, and the sickle feathers short; the comb, wattles, face, and earlobes bright red; the shanks and toes yellow, or reddish-yellow; beak yellow or horn colour. Weight: males, 6 to 7½ pounds; females, 4½ to 6 pounds. The elimination of black in the body plumage, or of white feathers, will be the main objective of breeders.

Variety.—There is only one in all respects except comb, for we can scarcely at present divide it merely by reason of the single or rose comb respectively (Figs. 68-70).

CHAPTER XIII

RACES OF DOMESTIC DUCKS

Rouen	Indian Runner	Cayuga
Duclair-Rouen	Merchtem	Russian
Aylesbury	Blue Termonde	Penguin
Pekin	Huttegem	Muscovy
	Blue Swedish	

THE domesticated races of the genus Anas are to be met with in almost every part of the habitable globe where man has passed from the primitive to more settled conditions. There is a very large number of varieties, differing greatly in size, shape, and colour of plumage, in some cases with wonderful brilliancy of feather marking. Many of these breeds, however, are small in size and purely ornamental, so that they do not enter into our present consideration, which is to deal with poultry of various kinds which, in one form or another, are domesticated and contribute to the food-supply of man. It is interesting to note that Europe, Asia, and America have each secured tame members of this species; but the greater number of our present races, if we include the ornamental varieties known to us, are Asiatic. In China duck-breeding has been carried on for centuries, and it is not improbable that further observations in that country would reveal many more types than those already recognised, as may also be the case in Siberia and Central Asia. The adaptability of the duck to change of environment, and the ease with which it can be domesticated, has led to its breeding in captivity at a very early stage in the world's history. Below are given the most important members of this valuable species.

ROUEN.

NOMENCLATURE: In all countries, Rouen; except *Dutch*, Rouaan; *Spanish*, Ruan.
VARIETY: One.
CLASSIFICATION: Table.
COLOUR OF FLESH AND SKIN: Dark yellow.
COLOUR OF LEGS AND FEET: Orange.
COLOUR OF EGG-SHELLS: Pale green.

Origin.—There is practically no doubt that this variety of duck is the result of direct breeding from the Mallard, or wild duck, which it resembles closely in colour of plumage. The evidence obtainable indicates that it is a native of France, although upon that point French writers do not make any special claim. M. Cornevin* says: 'If it is only probable, but not demonstrable, that this race was created in Normandy, it is certain that in that region it is bred largely for sale in Paris and for exportation to England.' Our view is that coloured ducks have been bred in all parts of Europe, inclusive of the British Isles, but that this race was more carefully selected in Northern France, whence specimens were imported to Britain, for the improvement of coloured ducks for reasons which are now given. Moubray† says: 'The only variety of the common duck among us is the Rhone duck, imported from France, generally of a dark-coloured plumage, larger size, and supposed to improve our breed. They are of darker flesh and more savoury than the English duck, but somewhat coarse. Rhone ducks have been so constantly imported for a great number of years that they are very generally mixed with our native breed.' In the edition of the same work, revised by L. A. Meall, published in 1854, it is stated that 'the Rouen variety is known by several names—as Rhone, from that department in France; Rohan, after the Cardinal of that name; and Roan, a word signifying (according to Bailey,) a bay, black, or sorrel colour, intermixed with grey, the derivation he gives being the French word *rouen*, which not inaptly describes the shades of brown and grey plumage in which ducks of this variety are almost uniformly clothed; and will not this last at once explain the origin of the name of Rouen, by which it is more correctly, or at least more generally, designated?

* 'Les Oiseaux de Basse-Cour,' par Ch. Cornevin (Paris 1895), pp. 50-51.
† 'Practical Treatise,' by Bonington Moubray, fifth edition (London, 1824), p. 34.

Although, from the fact of our receiving the principal supplies of this stock from France, many writers have supposed that its application is taken from the town of Rouen.' Dixon scarcely does justice to the subject, in that he says:* 'I am even uncharitable enough to suspect that incorrect names are purposely given to unusual varieties by a few poultry merchants, in order to conceal the source from which they were originally derived. My notion is that the title Rouen and its aliases is only a trade name, intended to elevate the common sort into a choice and more marketable variety.' Wingfield and Johnson † show that a brown duck was common in the fifties of last century, perhaps owing something to the influences mentioned by Moubray earlier in the century, and that birds had been received from France. Mr. Harrison Weir ‡ refers to importations in the forties, suggesting that the reason why Rouens were so common last century in the South of England was that they were brought over from France 'to the coast farms, either by fishermen, or, what is more probable, by some of the numerous bands of smugglers that used to land and run their cargoes on many of the available places on the Sussex coast.' We may, therefore, fairly give credit to our French neighbours for their share in the modern Rouen, if not its actual creation.

History.—From what has already been stated it can be assumed that the name Rouen has been given for at least seventy years, for Dickson says:* 'The tame variety most in request is the dark-coloured Rouen, or Rhone, duck, originally from France,' but it is equally probable that the designation is a variation of the last name. Its value was soon recognised as greater than that of the common brown duck, more especially as to size of body and brilliancy of plumage. It is equally true that it has attained its greatest perfection in Britain, where breeding is, generally speaking, on lines of greater fixity. To that extent the value of poultry exhibitions may be recognised, as they have led to the adoption of defined characters, and stimulated the improvement of the race in other directions. So far as we are aware, no importations have taken place from France for several decades. In fact, the best Rouens we have seen in France and other Continental countries were either imported from Britain or descendants of imported stock. Strange to say, within recent years the Rouen has lost ground, due to its slowness of growth and the fact that other races have more completely met the market requirements. As a show duck it is *facile princeps*.

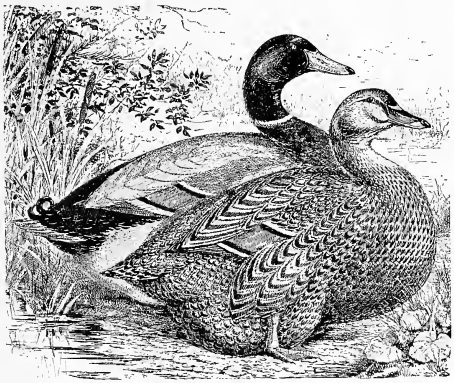


FIG. 71.—ROUEN DUCKS.

* 'Ornamental and Domestic Poultry,' by Rev. E. S. Dixon, M.A. (London, 1850), p. 134.

† 'The Poultry Book,' by Wingfield and Johnson (London, 1853), p. 291.

‡ 'Our Poultry,' by Harrison Weir, F.R.H.S. (London, 1902), p. 681.

* 'Poultry,' by Walter B. Dickson (London 1838), p. 241.

Economic Qualities.—The Rouen duck in flesh qualities is the finest of all the domestic races, in that the meat is not only abundant, but fine in flavour, and decidedly fuller in quality than any other breed. The perfection of duck flesh is a well-grown Rouen duckling of five to six months in, say, September to November. But the chief and most profitable demand is for ducklings in the spring and early summer, for which purpose it is practically useless. Hence it is kept only to a limited extent by utility poultry-breeders, who must regard cost and returns. The production of autumn ducks is much more expensive than spring ducklings, due to the longer time they must be fed, and when we take into account that such a bird, weighing 7 pounds, will sell for much less than a spring duckling of half the size, no further explanation need be given as to the reason why Rouens are so little kept. From the colour of the plumage, however, they will look well when white birds would soon become soiled. They are naturally hardy, thriving well where there is plenty of water and wood, are very tame, and attain a large size when fully grown, frequently reaching 11 pounds in the male and 10 pounds in the female. The ducks are excellent layers of large-sized eggs, and if kept under natural conditions the eggs are usually very fertile. The youngsters can be easily reared, but, as we have already seen, are somewhat slow in growth. They are scarcely ready for fattening until sixteen weeks, and do not then lay on flesh nearly so well as is the case eight or ten weeks later, when they can be fatted up to 7 and 8 pounds, and even more. We have seen eight-months-old ducks which scaled at 11 pounds, but that is exceptional.

Description (Fig. 71).—The Rouen is a big, massive bird, very long and wide in frame, deep from back to keel, and full in front, showing a broad, deep breast; the back is long and broad; wings large and powerful, carried well up, the ends resting on the stern; the neck is long and very graceful, with a curve but not arched; head massive and broad, with a long, wide, and flat beak, built in a direct line with the eye. It is bright green-yellow, with a black bean at the tip; the eye is bold and full; the tail is short, with stiff feathers, two or three of which are curled in the male; the legs and feet are medium in length, very stout in bone, and set midway on the body, whilst the toes are straight and well webbed, and both are brick-red in colour; the plumage is very brilliant indeed in the male during the breeding season, but afterwards changes to that of the female, as in the Mallard; the head and neck are a rich green, below which is a clear, broad white band about 1 inch above the shoulders; the breast is of a deep claret, forming a clear plate, but the flanks, stern, and abdomen are a blue French grey, the flanks and sides clearly marked with black, as are the small coverts of the wings; the back and rump are a rich green-black, and the tail slaty-black; the flight feathers of the wings are slaty-black with a brown tinge, and across the wings are broad purple bands, outside which are narrow bands of black, and then an outer bar of white. The female has a ground body colour of golden chestnut or brown, each feather pencilled with rich black, like chain armour; the wing-bar is the same as in the male, and the head and neck a dark chestnut brown, the head showing a wide dark line from beak to neck; the general appearance is of a large, massive, strong duck, deep in body and very long. Weight: males, 9 to 11 pounds; females, 8 to 10 pounds.

French writers refer to a white Rouen, but we have no acquaintance with it.

DUCLAIR-ROUEN.

NOMENCLATURE: Duclair, or Duclair-Rouen.
VARIETY: One.
CLASSIFICATION: Table.
COLOUR OF FLESH AND SKIN: White.
COLOUR OF LEGS AND FEET: Reddish-brown.
COLOUR OF EGG-SHELLS: White to pale green.

Origin.—It is generally admitted that this breed originated in the lower regions of the river Seine, in France, but we have no evidence as to how it has been produced. It is parti-coloured, having some resemblance to the Rouen; but as brown ducks were common at one period all over Western Europe, it is probable that it has been selected therefrom.

History.—Our first knowledge of the Duclair duck was obtained from an article which appeared in the *Live Stock Journal*,* followed by others. From this information it was evident that the duck was exceedingly prolific and good in flesh qualities. Miss May Arnold, writing in the same journal, stated that† it is 'the remains of an old Norman duck, preserved by special circumstances from being crossed out by the wild duck into that duck which we have magnified into the English Rouen.' It has not been taken up for exhibition purposes, and therefore is not much known outside its own district, although it is found in other parts of France.

Economic Qualities.—This duck is very quick in growth, in that respect quite equalling the Aylesbury, as ducklings are ready for killing by the time they are nine weeks old. The flesh is abundant and of good colour. They fatten very well indeed, and are very hardy, thriving in cold weather, as they are reared under rough conditions. The ducks are excellent layers, and reports have been published showing that, for practical purposes, they have proved most successful in the United Kingdom.

* November 14, 1879, p. 401.
† *Live Stock Journal*, October 8, 1880, p. 343.

Description.—These birds are similar to the Rouen in shape, as is the body colour, except that it is less brilliant in hue; but it has a white neck and breast, which gives it a distinctive character. The beak of the drake is dark green, and of the duck nearly black. The legs in both sexes are reddish-brown. Weight: males, 8 to 9 pounds; females, 7 to 8 pounds.

AYLESBURY.

NOMENCLATURE: In all countries, Aylesbury.
VARIETY: One.
CLASSIFICATION: Table.
COLOUR OF FLESH AND SKIN: White.
COLOUR OF LEGS AND FEET: Bright Orange.
COLOUR OF EGG-SHELLS: White, or greenish-white.

Origin.—White ducks appear to have been known for centuries, and the fact that white-plumaged birds are occasionally produced by dark or rich hued races in our own day explains the origin of the Aylesbury. The most recent instance of this was given in the *Standard*, February 15, 1899, by Mr. John Titterton, who said: 'Five years ago Mr. Charles Ambrose, of Ely, discovered two white ducklings in a brood of pure wild birds. These were caught and isolated, the result being that out of a team or flock of wild ducks every bird is now hatched pure white. Nothing can exceed the elegance of these birds, either in their movement on the water or in their flight, which, by the way, seems to be rather more quick than that of their darker-coloured progenitors.' Mr. Harrison Weir, F.R.H.S., as quoted in 'Our Poultry,' made further inquiries as to these birds, which, after several years of selection, bred almost entirely white ducklings; and from the fact, also, that the eggs were white, he came to the conclusion that it was in this way the Aylesbury was produced. The changes which distinguish the last-named breed, apart from coloration of plumage, from its wild ancestor are the result of breeding upon definite lines, on changes of condition or of food. We need, therefore, look no further in respect to its origin.

History.—Some of the older writers upon poultry termed this race the White English, but in the early part of last century the name Aylesbury was given, doubtless due to the fact that duck-breeding was extensively practised in the vale of Aylesbury, in Buckinghamshire, where the soil was and is specially suitable for this industry, producing the finest specimens, and that the best ducklings came thence. The first reference which we have been able to trace where the name Aylesbury was given is in the work by Bonington Moubray, first published about 1815, in which he says: 'The English duck, particularly the white variety, and when they chance to have very light-coloured flesh, are never of so high and savoury flavour as the dark colours. . . . The White Aylesbury are a beautiful and ornamental stock, matching well in colour with the Embden geese. They are said to be early breeders.'* In Rees' 'Cyclopædia,' published in 1819, there is a paragraph dealing with ducks, but this is chiefly as to the management, and does not treat upon the different breeds. However, in the early part of last century a variety was known as the Aylesbury, owing to the fact that at the period named this variety was kept to a large extent in the vale of Aylesbury, in Buckinghamshire. Since that time the name has been universally adopted. The breed has proved one of the most valuable for early maturity, which explains its popularity, not only in this country, but elsewhere, whilst it has always had a strong clientele among exhibitors. About thirty years ago the appearances were that the race was losing both size and vigour, probably owing to the fact that nearly everyone obtained their stock birds from Buckinghamshire, and that in that county inbreeding was almost universal. Since that time the injury thus done has been overcome, for which we may thank an out-cross of Pekin blood, which has restored the virility of the Aylesbury. At the same time much is owing to these birds being bred in many parts of the country, and thus the choice of stock is greatly increased. Mere change of conditions is in itself often beneficial.

Economic Qualities.—For marketing purposes the Aylesbury stands easily at the head of domestic ducks, the reason for which is because of its rapid growth and early maturity. Ducklings can be produced ready for killing within seven to nine weeks from the day of hatching, weighing from 4 to 5½ pounds. In fact, to be sold as ducklings and thus command the best price they must be marketed by the time they are nine weeks old, for then they begin to assume adult plumage. As the season when prices for these dainty birds rule high in the English markets is from February to June, quickness of growth is an important factor in respect to the profit attained, as the birds are heavy feeders. They are light in bone, and carry a considerable amount of white or creamy-white flesh, which is well placed on the breast. As layers they are excellent, and when bred at the right season commence production early, often in October or November. We have known flocks of Aylesbury ducks producing an average of 150 eggs in the course of twelve months, and trustworthy evidence is forthcoming of individual ducks laying between 80 and 90 eggs without a break. They seldom sit, and are not much relied upon for that purpose. If one drake be kept with three ducks, or two drakes with five ducks, it will seldom be found that eggs are infertile, provided that they have plenty of water for swimming and a fair amount of liberty. Kept under proper conditions they are very hardy. As mature stock they do not attain

* 'Practical Treatise,' by B. Moubray, p. 34.

the size, nor has their flesh the flavour, of the Rouen, but for the duckling trade they have no rival.

Description (Fig. 72).—In appearance the Aylesbury is boat-shaped, in that the line of body is level with the ground, the legs being placed about midway between breast and stern. One of the characteristics of the Aylesbury is the delicate colour of the bill and legs, the former being pinky or like flesh. It has been claimed that this delicate colour of the bill can only be obtained in the vale of Aylesbury. Undoubtedly it cannot be maintained upon strong soils, but wherever gravel is abundant in the streams or bottoms of the ponds, there the same colour of bill can be secured as in the vale of Aylesbury. It may be thought that the colour of the bill is merely a fancy point, but that is incorrect. Frequently these external characters are connected with economic qualities, and one of the results of our later study has been to show, to some extent at any rate, the correlation between characteristics and qualities. It is found that the colour of the bill indicates to a large extent the colour and quality of the flesh. Of late years there has been rather a tendency to increase the size of the body in the Aylesbury, and also to deepen the keel. Up to a certain point this is beneficial, but at the present time there is a tendency to exaggerate, and some of the heavy-keeled birds have proved to be uncertain breeders. In weight the Aylesbury should be, for drakes, 9 to 10 pounds, and for ducks a pound lighter, though if the frame of the bird is large at the beginning of the breeding season, the birds will be none the worse if they each weigh a pound less. Of course, we should not breed from small birds, but mere weight is in itself a minor consideration. What we want is a strong, large frame. The plumage is pure white, and in this there must be no sign of yellowness. Some of the specimens exhibited are almost too white—that is, the plumage has a washed-out appearance. This is frequently due to the fact that the birds are kept under unnatural conditions and protected from sunlight. That plan, however, should only be carried out when birds are intended for exhibition, and even then we think that the slight bluish tinge which runs through white plumage when the white is a combination of colours rather than due to an absence of pigment adds greatly to the appear-

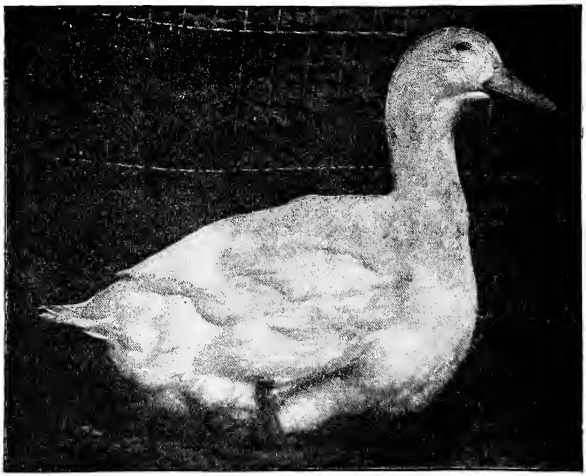


Fig. 72.—Aylesbury Duck.
Bred by John Gillies, Chirnside, N.B.

ance of the bird. The beak is fine, and the head and bill long and perfectly straight, whilst the legs are of a light orange colour. For breeding stock it is important that the bones of the leg should be stout without being heavy—in fact, one of the great features of the Aylesbury is their light bones—but at the same time there must be sufficient bone to indicate vigour. The only difference between the male and female birds is that the former have two or three curled feathers in the tail.

PEKIN.

NOMENCLATURE: In all countries, Pekin, or Peking.
VARIETY: One.
CLASSIFICATION: Egg Production.
COLOUR OF FLESH AND SKIN: Yellow.
COLOUR OF LEGS AND FEET: Dark Orange.
COLOUR OF EGG-SHELLS: White.

Origin.—This race of ducks is a native of China, whence it was imported direct to England and America. Duck-breeding is extensively followed in certain districts of China, but we know comparatively little as to the breeds to be met with there. Mr. Harrison Weir states that he had* 'made inquiries of travellers who have visited Langshan, and learned that there is a white breed of ducks there that are not only distinct from ours, but larger and more beautiful.' In the absence of definite information as to the distribution of the Pekin in China, we can accept that country as the place of origin. Whether the Penguin duck had any share in its formation is probable, but not provable.

History.—The first Pekins were imported into England in the year 1872, by Mr. Raymond Harvey, of Coomb End, near Cheltenham, who brought them direct from Pekin.† The following year a trio were imported into the United States, respecting which the late Mr. Mason C. Weld records the story as follows, under date of January, 20, 1874 :‡

'Mr. Jas. E. Palmer, of Stonington, a seaboard town of Connecticut, returned last year from a journey in the East, having visited China and its capital. He saw at Pekin some large ducks, which he at first took for geese on account of their large size, the length of their necks, and their large heads. A large number were secured and placed on board the ship in which he returned. All died except one young drake and two ducks, which landed in New York, March 14, 1873, and were successfully taken to Palmer's farm, near Stonington. They were indeed alive, but dwarfed by the voyage, and not larger than good-sized Aylesburys. They recovered rapidly, and . . . the ducks laid constantly until the end of July, the number of eggs averaging considerably more than one hundred each.'

* 'Our Poultry,' by Harrison Weir, F.R.H.S. (London, 1902), p. 690.
† *Live Stock Journal*, vol. i., 1874, p. 97.
‡ *Ibid.*, p. 9.

The Pekin very rapidly won a large amount of favour. In England its vigour, prolificacy, and hardihood were special recommendations, as there can be little doubt that, owing to inbreeding, the Aylesbury was showing signs of rapid exhaustion, and there were no means of obtaining fresh blood at that time. In spite of the differences between the Aylesbury and Pekin, the latter was largely used as an out-cross, and contributed much to the restoration of the former as the premier duck for table qualities in this country. The signs of this cross have largely passed away, but the influence remains in the renewed vigour of the Buckinghamshire breed. In America the Pekin won an even greater amount of popularity. For some unexplained reason the Aylesbury has never found favour in America, but the Pekin has attained great success both in the United States and Canada, where yellow or cream coloured flesh in poultry is preferred to white. There its hardy nature has enabled it to meet the extremes of the climate. The great duck ranches in North America have been almost exclusively created by the development of Pekin ducks for market purposes, in spite of the fact that they are not so rapid in growth as the Aylesbury. What is true across the Atlantic is equally the case in several European countries, more especially Southern Germany, Austria, and Hungary, where the Pekin is regarded with special favour, as it is thought to be the hardiest of white-plumaged races. Frequently a breed adapts itself to one set of conditions more than to others, and in that fact we have an explanation of the differing ways in which races of birds are accepted. The experience in the United Kingdom is in favour of the Aylesbury, as previously explained. The chief value of the Pekin is as an egg-producer, and as an out-cross for maintaining the virility of the English duck.

Economic Qualities.—The leading quality of the Pekin is egg-laying, in which respect it stands easily at the head of the larger races of ducks. It is wonderfully hardy, bearing both cold and heat extremely well, and is an excellent forager. The ducks seldom sit, and cannot be relied upon as mothers. In appearance this breed would seem to be a large bird, but the frame is smaller than might be expected, owing to its thick covering of feathers. Adult ducks grow to a good size, and are fairly meaty; but the ducklings are somewhat lean, requiring ten to eleven weeks to attain a killing age, whereas the Aylesburys are ready two to three weeks earlier, when they will weigh more and be fleshier. This result is to be anticipated in all cases where egg-laying is highly developed, as that must be at the expense of the flesh properties. Pekins do not fatten well, and, having yellow flesh, they have not won any great amount of popularity for practical purposes, except when used for crossing, in which respect they are very valuable.

Description (Fig. 73).—The body of the Pekin is of medium length, but very broad, with a wide breast, which is carried well forward, and a full paunch. The body does not appear very deep, in that there is no sign of keel. It is carried upright—that is, the breast is much higher from the ground than the tail, giving a suggestion of penguin shape, due to the legs being set well back; the neck is thick and moderately long, well arched, and carried in front of the body; the head is very broad and large, and the skull prominent, sharply rising from the beak, which is short, broad and thick, and slightly curved upwards to the tip. It is in colour bright orange; the eye is dark leaden blue; the wings are short, carried well up, and the tail full and carried high; the legs are of medium length, very straight and stout in bone, and dark orange in colour. Although the Pekin is regarded as a white duck, it is not really so, as there is a creamy or canary tinge running through the entire plumage, and the appearance of such a tinge in the Aylesbury is an evidence of Pekin blood. The birds are active and alert, moving freely. Weight: males, $7\frac{1}{2}$ to 9 pounds: females, 6 to $7\frac{1}{2}$ pounds.

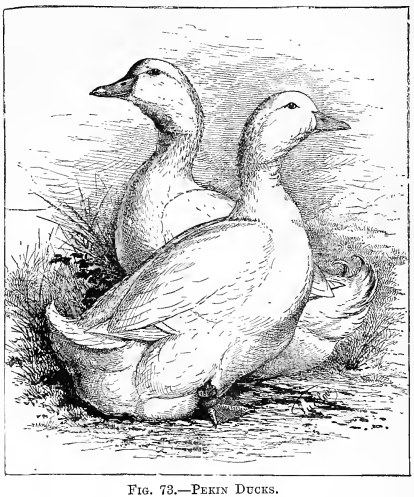


FIG. 73.—PEKIN DUCKS.

INDIAN RUNNER.

NOMENCLATURE: *English*, Indian Runner; *French*, Coureur Indien; *German*, Indische Laufenten; *Dutch*, Indische Loopeend; *Danish*, Indische Löeander; *Italian*, Corritrici Indiane; *Spanish*, Corredor Indio; *Hungarian*, Indiai futo.
VARIETY: One.
CLASSIFICATION: Egg Production.
COLOUR OF FLESH AND SKIN: Orange, or rich cream.
COLOUR OF LEGS AND FEET: Deep yellow.
COLOUR OF EGG-SHELLS: White.

Origin.—The story as to the introduction of this breed is that about sixty years ago* 'a drake and trio of ducks were originally brought from India by a sea-captain to Whitehaven, and presented to some friends who at that time followed the occupation of farming in West Cumberland. . . . Another consignment was imported by the same gentleman some years later, and from these two importations it is probable that the present-day Runner ducks are either directly or indirectly descended. They were not known to their introducer by any special or distinctive name, having simply attracted his attention when ashore by their active habits and peculiar penguin carriage.' A further importation was made by the late Henry Digby in 1898, which is the only actual date we have been able to obtain. An interesting contribution was made by Mr. F. Finn, B.A., F.Z.S., to this question in a weekly journal,* in which he says: 'The true Indian Runner, with semi-erect carriage, active gait, straight profile, and the accompanying indifference to water and great laying power, does exist in India somewhere, but is rare and in few hands, and consequently difficult to obtain. . . . I am, however, of opinion that ducks of the Indian Runner type or form can still be obtained from several Eastern localities outside India.' He further indicates that ducks of this type have been seen near Zanzibar and Suez, and he hints as to their affinity with the Penguin duck. The name was given in connection with their action when in motion.

History.—Introduced about the middle of last century, as already stated, although Mr. Harrison Weir suggests an earlier importation in the thirties, they soon became popular in Cumberland by reason of their remarkable powers as layers, as they commence production early and continue well on to the time of moult. It was not until about 1893 or 1894 that they

* 'The Indian Runner Duck,' by J. Donald, pamphlet undated, p. 1.

* *Feathered World*, September 25, 1903, p. 446.

became known elsewhere, since which time steady progress has been made in popularity. The display made at Kendal in 1896 brought them prominently forward, and they have been introduced with considerable success both into Ireland and America.

Economic Qualities.—As indicated above, these ducks are wonderful layers, in some cases producing nearly 200 eggs per annum, and continue in profit until they are six or seven years old. The eggs are smaller reared, the Indian Runner is essentially a utility bird.

Description (Fig. 74).—Body long and narrow, well elevated in front, and without any sign of keel, but with a well-rounded breast; the neck is long and fine, and carried erect; the head is fine, rather flat, with a broad, strong, nearly straight bill, which is wedge-shaped; the eye is placed high in the head; wings are carried well up, and the tail rather high;

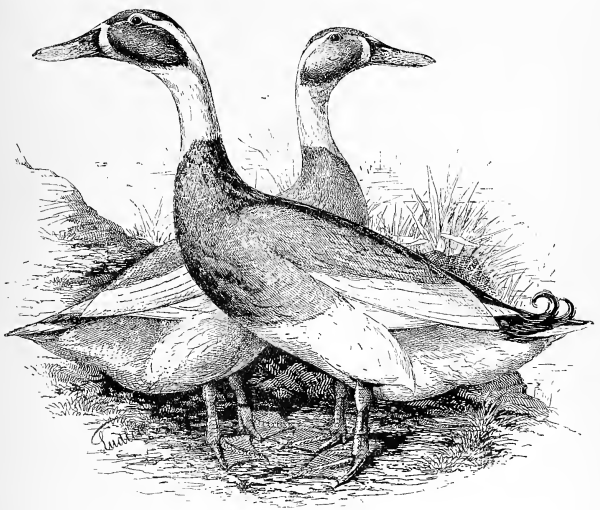


FIG. 74.—INDIAN RUNNER DUCKS.

than is usual with ducks, and they can thus be mixed with hen's eggs, to the advantage of the vendor. Their flesh is very fine in quality, juicy, and well flavoured, but not very abundant, as they are small birds. If a demand could be created for small ducklings they would be very useful. In America the size has been considerably increased. The ducks are practically non-sitters, and cannot be relied upon for maternal duties. They are splendid foragers, and find the greater portion of their food, so that they are inexpensive to maintain if given a free range. Hardy and easily

the legs are long and well set back, and the general appearance is slight and racy-looking. In colour the head is a greyish-fawn in the duck and bronze-green in the drake, with narrow bands of white dividing the base of the bill from the head and along the cheek; the neck, wing-flights, and fluff are white, and the rest of the body fawn, or in some cases even grey; the bill is green in adult birds with a black bean, in ducklings yellow; the legs and toes a bright, deep orange red. Weight: males, 4 to 4½ pounds; females, 3½ to 4 pounds.

MERCHTEM.

NOMENCLATURE Merchtem.
VARIETY: One.
CLASSIFICATION: Table.
COLOUR OF FLESH AND SKIN: White.
COLOUR OF LEGS AND FEET: Creamy.
COLOUR OF EGG-SHELLS: White.

Origin.—The descent of this breed of ducks appears to be very uncertain. The general opinion is that it is a sport from the Blue Termonde, but smaller in size. In appearance it greatly resembles the Aylesbury, except that it is not so large, and the bill often has a blue bean; also, the legs are blue. These differences give it a distinct character, and all suggestions that the Aylesbury and Merchtem are one and the same may be dismissed as incorrect, although there are floating traditions that white birds were formerly exported to England.

History.—This duck is largely bred in the Merchtem district of Belgium, to the north-east of Brussels, where the duck industry is extensive and apparently lucrative. It is bred entirely for practical purposes, in order to supply the Brussels markets during the early summer. In that part of the country the soil is light, suiting these birds very well, as they cannot be reared under the conditions adopted elsewhere, as stated below. So far as can be learnt, these Merchtem ducks have been bred for a long period of time in that district.

Economic Qualities.—The Merchtem duck is famous for its flesh qualities, as it makes rapid growth, and produces a satisfactory quantity of flesh, which is very white and most delicious in flavour, with that mellowness which is preferred on the best markets. The ducks are stated to be very prolific layers of large-sized, almost white-shelled eggs. It is bred usually under somewhat unnatural conditions, and therefore is not among the hardiest of its species, the method adopted not including the provision of water to swim in for either adult or young stock. In some of the establishments we have visited in the Merchtem district the ducklings are reared in enclosed yards, very like those in Buckinghamshire. The birds fatten rapidly, and can be marketed quickly.

Description.—In body this variety resembles that of the Aylesbury in all respects, except that it is smaller. It is long and boat-shaped, the line of breast being level with the ground; the neck is of medium length, and well arched; the head is fine and the beak straight and long, reddish-white in colour; the legs, which are longer than in the Aylesbury, are set well in the centre of the body, but are yellow in colour; the plumage is white, but there is an undoubted tendency to blue, and, in fact, it might be called bluish-white. Weight: males, 6 to 7½ pounds; females, 5 to 6½ pounds. The size has been increased by breeding, but does not yet in that respect equal the Aylesbury.

BLUE TERMONDE.

NOMENCLATURE: *Belgium*, Bleu de Termonde; *English*, Blue Termonde; *German*, Blaue Termonde; *Dutch*, Blauw Termonde; *Danish*, Blaa Termonde; *Spanish*, Termonde Azulado.
VARIETY: One.
CLASSIFICATION: Table.
COLOUR OF FLESH AND SKIN: White.
COLOUR OF LEGS AND FEET: Red-brown and black.
COLOUR OF EGG-SHELLS: Bluish-white.

Origin.—As stated above, the opinion held in Belgium is that the White Merchtem is a sport from the race under review, which is bred in the valley of the Scheldt between Ghent and Malines. But as to that no evidence is obtainable. Little can be deduced from the colour of the plumage, for white, blue, and red ducks have been met with in several countries; in fact, blue ducks at one time were by no means uncommon in England. Blue, or rather slate-grey—which would be a better description—is the result of mixing black and white, and, although somewhat difficult to maintain, is by no means uncommon. The suggestion is made that the reason why the Blue Termonde duck has attained so large a measure of popularity is that birds with this colour of plumage were less seen by their enemies, both human and animal, than if they were white or red, and thus were preferred by the peasants. But there is another cause, namely, blue plumage in ducks represents influences which make for vigour of constitution and quality of flesh. Dixon mentions* that ducks were to be met with in Norfolk having a slate-blue or bluish-dun plumage; and Mr. Lewis Wright says:† 'The late Mr. Teebay several times told us that, about 1860, there was a recognised local race of large blue ducks in Lancashire.'

History.—The Blue Termonde duck has a considerable distribution in mid-Belgium, where it is bred for utility purposes. It is frequently exhibited, but, so far as we are aware, has not been used elsewhere. Prior to ten years ago it was scarcely recognised as a distinct race, but that position must now be accorded to it.

Economic Qualities.—This variety is very large in size, and produces a considerable amount of flesh, but, like the Rouen, it is slower in growth than other breeds. The flesh is excellent in quality and good in flavour, due to its being reared in a hardy manner, which would be impossible unless it were vigorous in constitution. M. Vander Snickt thus explains the influence:‡ 'Exercise develops the

* 'Ornamental and Domestic Poultry,' by Rev. E. S. Dixon (London, 1850), p. 133.
† 'New Book of Poultry,' by Lewis Wright (London, 1902), p. 539.
‡ *Chasse et Pêche*, July 15, 1900, p. 673.

muscles of the part of the body set in motion. A duckling develops by exercise alone the muscles of the thigh; those of the breast come by heredity, because it is fatted and eats before it has ever had the need to use the wings.'

The great value of the Blue Termonde is in crossing with softer-fleshed ducks, as in the case of the Indian Game and Dorking fowls, and it secures this result without the use of yellow-fleshed ducks, so that the colour of the flesh and skin is not adversely affected, whilst the quality of the meat is greatly improved. It is a bird of great vigour, hardy in the extreme, and the ducks are excellent layers. From the appearance of the Huttegem duck it may be assumed that the Blue Termonde has either been used for the production of that race, or that both own the same ancestry.

Description.—The Blue Termonde is very long in body, broad, and deep, carrying the breast well in front, but retaining the boat shape; the neck is fairly long, well arched, and the head, which is carried well back, is large, broad, and long; the beak is also long and blue in colour; the legs, which are of medium length, and feet are red-brown and black; the plumage is what breeders usually term blue—that is, slate-grey evenly throughout the body, each feather slightly bordered with black. In some cases the throat is white, which gives them a pretty appearance, but this is not universal. Weight: males, 9 to 10 pounds; females, 8 to 9 pounds.

HUTTEGEM.

Nomenclature: Huttegem.
Varieties: Blue, Dark Fawn, or Tawny.
Classification: Table.
Colour of Flesh and Skin: White.
Colour of Legs and Feet: Blue, or slate.
Colour of Egg-shells: White, or pale green.

Origin.—In the absence of definite information, which appears to be unobtainable, we may safely regard this race as the result of crossing the Blue Termonde upon a smaller duck with a body long and narrow, resembling that of the Indian Runner, which latter type was formerly very common in the Netherlands. But that was evidently at a distant period of time, as the present characters are fairly well fixed, though it should be remembered that Belgian duck-breeders do not pay much attention to colour of plumage so long as type of body and colour of bill and legs are in accordance with their views. The descent of the Huttegem is probably

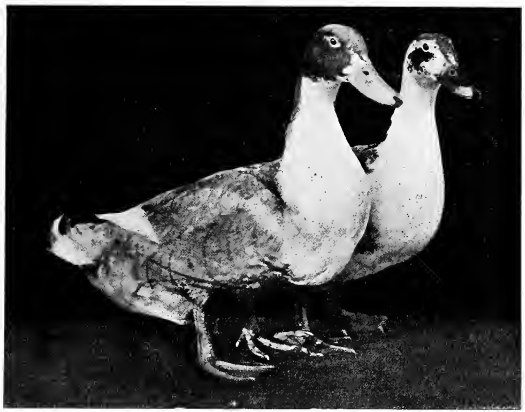
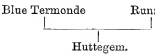


Fig. 75.—Huttegem Ducks.



History.—This duck is bred very extensively in the Audenarde district of East Flanders, where hundreds of thousands of ducklings are raised annually. The name is taken from the village of Huttegem, near the city of Audenarde, as that is the centre of the in-

dustry which has been followed for several decades. The requirements are a hardy, rapid-growing duck, attaining maturity early, and commencing to lay when five or six months old. It does not appear to have extended elsewhere. The district named is low-lying, with large areas of water meadows, and in the streams grow abundantly water lentils, which are regarded as necessary for ducklings.

Economic Qualities.—As already stated, the Huttegem duck commences to lay early, in August and September, and the eggs are used for hatching only from young stock. The ducklings are very hardy, as they are put out on the fields when two days old, even if the ground is covered with snow, and they are given access to water from the first, if the ice has to be broken for the purpose. Only vigorous birds could stand such treatment, but deaths are few and far between. They are splendid foragers, roaming widely in search of worms and other natural food. They grow rapidly, and at five to six weeks old can be put up for fattening, so that they are killed at eight to nine weeks after hatching. The flesh is fairly abundant, and fine in flavour. The ducks are prolific layers, but do not sit.

Description.—Of a medium size, the Huttegem is long, but rather narrow, flattish in back and round below, deepest midway between the legs, and higher in breast than stern, but without Penguin carriage; the neck is short, and the head long, with a straight, flat bill and small forehead; the back of the head, neck, breast, under-parts, and wing-flights are white, the head and rest of body coloured as stated below, but the colour on the head is peculiar in that the crown and around the eye above and below is coloured in ⊃-shape, the white running to the eye, which is at the base; the beak is blue, a white line dividing it from the head; legs and feet slate-blue.

Varieties.—In the Blue (Fig. 75) the head and body are slate-blue, and in the Tawny a dark fawn.

BLUE SWEDISH.

NOMENCLATURE: *English*, Blue Swedish; *German*, Schwedische; *Dutch*, Zweedsche Blauwe; *Danish*, Blaa Svenske; *Spanish*, Suecs Azulada; *Hungarian*, Svéd Kék.
VARIETY: One.
CLASSIFICATION: Table.
COLOUR OF FLESH AND SKIN: Creamy-white.
COLOUR OF LEGS AND FEET: Orange-red.
COLOUR OF EGG-SHELLS: Pale blue.

Origin.—All the evidence which we have been able to obtain with regard to this duck is from German sources, as it has held a recognised position in the Fatherland for many years, and is bred to a considerable extent. It is stated that it was introduced about 1835 from Pommern, which at that period was part of Sweden. Hence the name given to the race. It is not improbable that the same influences which led to the Blue Termonde account for the Blue Swedish, and it is quite possible that both own the same progenitors. Upon that question we do not enter, as there is no certainty. It is more than likely that these birds came from the Farther East, and it is suggestive that the countries in which blue ducks were found were on the northern coast-line of Europe, although blue sports are by no means uncommon in the United Kingdom and in France.

History.—It has been stated that a race of blue ducks were known in the North of England early last

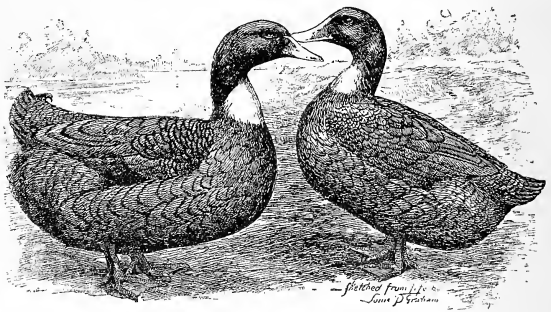


FIG. 76.—BLUE SWEDISH DUCKS.

century, reputed to have come originally from Holland; but breeding has proceeded on other lines, and thus blue ducks are not often seen. Specimens were imported into America in 1884 and onwards, and in the hands of a few breeders have proved profitable. But it is not stated whence they were received, and it is not improbable that they came from Germany. A few years ago some blue ducks were shown in England under the name of Orpingtons, but it is generally thought that they were renamed Swedish or Belgian.

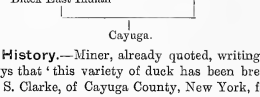
Economic Qualities.—Whilst the ducks are good average layers, egg production is not their chief quality, as they are specially noted for flesh properties. The meat is well distributed and abundant, even when we regard the size of these birds, and it is well flavoured, which may be due to the fact that they are bred under natural conditions. It is said that when they are entirely domesticated, unless special care is taken in selection of stock, they lose much of the blue colour of plumage, which is very suggestive as showing how variations have been obtained. The Blue Swedish is not a rapid grower, but fattens well and makes large, plump, meaty birds.

Description (Fig. 76).—The body is long, broad and deep, with a full, round breast, and is well balanced upon the legs, so that it follows the Rouen in shape; the back is level, long and broad, with a slight concave sweep from shoulder to tail; the neck is strong, slightly arched, and of medium length; the head is round and broad, with a flat forehead; the beak in a straight line from the top of the head, rather long, broad, and in the drake olive-green, but much browner in the duck; eyes round, full, and dark brown in colour; wings full-sized, carried close up; tail broad, well extended behind; legs and feet strong, rather over the medium in length, and with toes well spread, in colour orange-red; the upper part of breast and the front of neck up to lower mandible white; the rest of the body of a dark steel blue-grey, the outer edges of the feathers marked with black, except the outer flight feathers, which are white. Weight: males, 6½ to 8 pounds; females, 5½ to 7 pounds. The general appearance is that of a strong, massive duck, rather above the medium in size, but not so large as the Rouen.

CAYUGA.

NOMENCLATURE: In all countries, Cayuga.
VARIETY: One.
CLASSIFICATION: Table.
COLOUR OF FLESH AND SKIN: White.
COLOUR OF LEGS AND FEET: Dull orange-brown.
COLOUR OF EGG-SHELLS: Very dark green.

Origin.—The evolution of this handsome variety of duck, which has never received in Europe its full meed of attention, is uncertain. That it came from America in the first instance is undoubted, but in the early part of last century a large black duck was common in the North of England, probably a sport from the Rouen. The accounts given as to the origin of the Cayuga are very indefinite. Miner states* that it 'is undoubtedly a cross between some wild variety and the domestic duck,' and Stoddard says† that 'it is said to have originated on the shores of Cayuga Lake, and to be a cross of the wild black duck upon the common Mallard.' That it was probably first made known in Cayuga County, New York State, may be accepted, but we think that its origin was South America, even though some specimens may have been captured in the northern half of that continent. From such evidence as can be obtained, large ducks of what are now called Black East Indians were to be seen about sixty years ago, and were called Buenos Ayrean, and the appearance of the two are so similar even now, except so far as size is concerned, as to lead to the opinion that they were originally the same. It must be remembered that in Europe the Black East Indian has been bred on small lines, and in fifty years it would be quite easy to make them distinct in respect to size. It is quite possible that the South American ducks met with in North America were crossed to secure a greater measure of domesticity, as this is frequently done. The following shows the descent so far as it can be traced:



History.—Miner, already quoted, writing in 1878, says that 'this variety of duck has been bred by Mr. J. S. Clarke, of Cayuga County, New York, for nearly twenty years, and . . . though Mr. Clarke has bred them for that length of time, they were first brought to notice through the columns of the *Albany Cultivator* in 1851. Mr. Havard, the editor (now of the *Boston Cultivator*), having seen in the market some ducks of this variety, dressed, and weighing about 8 pounds each, and always having an eye to the useful, traced them to Mr. Clarke, since which time the stock has been more widely disseminated.' It would appear that the first Cayuga ducks were imported to Britain from America in 1871. They have had a limited number of admirers, but have never found much acceptance for practical purposes, in spite of the fact that they have very useful qualities, more especially for crossing to improve the flavour of the flesh. To secure richness of plumage a good deal of Black East Indian blood was introduced, which had the effect of reducing the size of body.

Economic Qualities.—The Cayuga duck is a fair layer, which quality has not been specially developed,

* 'Domestic Poultry Book,' by T. B. Miner (New York, 1878), p. 248.
† 'Domestic Waterfowl,' by H. H. Stoddard (Hartford, Connecticut, 1885), p. 20.

as would probably have resulted had the breed been taken up more widely by practical poultry-keepers. They are very meaty, carrying a considerable amount of flesh on the breast, which is fine in flavour, richer than is usual with the softer-fleshed races. The meat is white, but not so much so as the Aylesbury. They are very hardy, and the ducklings can be reared easily, except where inbreeding is resorted to for the production of exhibition stock. Upon our markets dark-legged ducks are regarded with less favour than those which are orange-yellow in that respect, but this is a prejudice which would be speedily overcome if these birds were bred to a greater extent and their qualities recognised. The crossing of a Cayuga drake upon Pekin ducks produces quick-growing ducklings, which are excellent in flavour of flesh.

Description.—The body is very long, wide, and thick from back to keel; the keel or sternum blade is large, carrying a large amount of meat; the breast well forward, and the line of body very level with the ground; the neck is long, tapering to the head, and well arched; the head large and broad, and the bill long and flat, the latter in a line with the eye; the wings are large and carried well up; the tail is full and carried fully behind, the drake having, as usual, two or three curled feathers; the legs are rather long, keeping the body well above the ground, and are strong in bone, in colour of a dull orange-brown, lighter between the toes; the plumage is in colour of a deep metallic black, with a greater brilliancy on the wings; the eye is black and the bill of a slaty-black, showing a jet-black saddle down the centre distinct from the sides, and stopping at the bean, which is deep black. Weight: As already stated in Britain crosses of the Black East Indian have reduced the size, and males are 6 to 7 pounds, females, 5 to 6 pounds; whereas in America the standard is 7 to 8 pounds for males, and 6 to 7 pounds for females, and the larger size are distinctly to be preferred, as brilliancy of plumage is of secondary value.

RUSSIAN.

During our visit to Russia, in which country and Siberia there are probably many races of ducks, as of fowls, unknown to us, the only breed of definite character we saw was called Indian, but we have not been able to obtain any definite information as to their origin, history, and economic qualities. We must content ourselves, therefore, with a brief description. These birds are of medium size, and boat-shaped; the drake has a fawn-coloured body, with brown feathers in the tail, except that the neck and back of the head is white, the rest of the head brown; the bill dark green, with a line of white dividing the bill from the head. In the ducks the plumage is fawn, but spangled or splashed with white, and the neck and back of head as in the drake; in both sexes the legs are red. In size these birds appeared to be: males, 7 pounds; females, 6 pounds. During visits paid to the various countries of Europe the variety above named is the only one that could be regarded as a novelty.

PENGUIN.

Many poultry books refer to a race of ducks which was imported from India about seventy years ago, to which the above name was given, by reason of the fact that they are almost upright in carriage, due to the legs being set far back in the body. The legs are short and they have a waddling gait, but are very active. The body is very long. Darwin states that they are found very generally in the Malayan Archipelago, and others say that they are common in India; but upon these questions we have no definite information. The Penguin duck has no practical value, but it is evident that they have a very definite affinity to the Indian Runner, and possibly, to a lesser extent, to the Pekin, and hence they must be mentioned.

Mr. Harrison Weir states* that 'Mr. Cross, of the Surrey Zoological Gardens (1837-1838), had several which bred on the island in the lake; these were of a light and dark fawn colour, the ordinary blue bars on the wing being of a dull slate tint. The ducklings were extremely odd-looking little things, and frequently fell in their attempt to walk fast or run. The next that came under my observation were at Birmingham, December, 1858, and were the property of Lord Berwick. These were a rich hazel and fawn in colour. Some are extremely pretty, being of a dull blue, light brown, blue-black, and splashed freely with white, having markings much in the same way as the Indian Runner ducks, of which I believe them to be a closely analogous variety.'

MUSCOVY.

NOMENCLATURE: *English*, Muscovy, or Musk; *French*, Barbaric, or Musque; *German*, Moschus; *Dutch*, Muscaat; *Danish*, Moskus; *Spanish*, Muscovy.
VARIETIES: Pied Black and White, White, Black, Blue-dun.
CLASSIFICATION: Table.
COLOUR OF FLESH AND SKIN: Dark cream.
COLOUR OF LEGS AND FEET: Orange-yellow.
COLOUR OF EGG-SHELLS: White.

Origin.—Nearly all the races of domestic ducks are denizens of the Eastern Hemisphere, and almost without exception appear to be descended from the Mallard, or wild-duck, although in some cases they have been modified by crosses, probably with the Muscovy. But this breed is a native of South America, where it is found in a wild state. Willughby and many later writers have regarded it as a distinct

* 'Our Poultry,' by Harrison Weir, F.R.H.S. (London, 1902), p. 693.

species, claiming that the crosses produced by the Muscovy and the common duck are sterile. That, however, is not borne out by later experience, and although the place of origin is so distinct, yet they are equally members of the same species; for such sterility is often found in the early days of domestication, and is one of the results of changed conditions. It is stated that it inhabits the hottest portions of tropical America. 'During the day it lives in swamps, where it finds congenial food, and towards the evening may be seen sitting in rows on the lower branches of large trees, descending thence to make inroads into the maize plantations and cornfields, where it does considerable damage, plucking up at the same time the mandioca or tapioca plants.'*

As a proof of its habitat specimens were received by the Zoological Society of London in 1851 and 1880. Hence the Muscovy duck differs from other races in that it is in direct and immediate descent from its wild progenitors; but as to the method of domestication there is no evidence to offer.

History.—The earliest reference we have come across referring to this breed is in a French work,† and Caius mentioned it in 1670 under the name of the Turkish duck. Willughby, who died in 1672, speaks of it as 'a wild Brazilian duck of the bigness of a goose,' and gives what is yet a correct description. Nearly all naturalists refer to it in a similar manner. Coming to the era of poultry-keeping, it does not receive much favour. Moubray says:‡ 'Muscovy and other foreign varieties of the duck are kept rather out of curiosity than for the table.' The reasons are given below. In the revised edition of the last-named work, published in 1854, an interesting account is given of the name now accorded to it, for it has received a host of designations—Brazilian, Peruvian, Indian, Guinea, Musk, Muscovite, Muscovy, Turkish, Barbary, etc.—but it is too long to quote. Briefly stated, it is to the effect that in the sixteenth century merchant adventurers who traded beyond the seas took high-sounding names for their companies, such as the 'Muscovite Company,' in the reign of Queen Elizabeth; and, as geographical knowledge at that time was very indefinite, names were accorded to novel importations which were, to say the least, misleading. But we incline to the opinion that the term 'Musk duck,' by which it was at one time known, due to the peculiar odour emitted by the flesh of old birds, was corrupted into Muscovy. Specimens are always to be met with, and a number of breeders find it useful for practical as well as ornamental purposes.

Economic Qualities.—The Muscovy duck is generally admitted to be a poor layer, but cases are known where the reverse was the case. It is a large-bodied bird, quick in growth, and carrying an abundance of meat, which is darkish in colour. The flesh is very fine in flavour. Dixon says* that 'the Musk duck is excellent eating if killed just before it is fully fledged; but it is longer in becoming fit for the table than the common duck. Their flesh is at first high-flavoured and tender, but an old bird would be rank, and the toughest of tough meat. It is strange that a dish should now be so much out of fashion as scarcely ever to be seen or tasted which, under the name of Guinea duck, graced every feast 150 years ago, and added dignity to every table at which it was produced.' These ducks fly well, but do not wander much. They are good graziers, can be kept easily in confinement, but are very savage, and their evil temper makes it practically impossible to keep other fowls with them, and explains why they have never become popular, in spite of undoubted flesh qualities, among farmers. They are hardy and vigorous.

Description.—In body they are very long, sometimes measuring 2 feet, broad and deep, and are boat-shaped; the neck and legs are of medium length, and fine in bone; the head is large and broad, and is ornamented on top with a tuft of feathers; the bill is small and curved; the face around the eye is entirely bare and bright red, but the chief peculiarity is that on the front of the head is a bright red knob of flesh not unlike a cherry, which with the featherless face gives it a somewhat raw appearance; the wings are large and strong, and the tail stands well out; the hill, legs, and feet are orange-yellow; there is a great difference in size between the male and female, the former often reaching 12 pounds, whilst the latter does not exceed 8 pounds.

Varieties.—The wild specimens are largely black, with a few white feathers on the head, but considerable variation has resulted from domestication, and we now have Pied Black and White, Pure White, Deep Black, and Blue Dun. Of these, the white are the most ornamental.

There is a large number of other races of ducks, but these are kept for ornamental purposes, and consequently do not concern us.

* *Proceedings of Zoological Society*, 1876.

† 'L'Histoire Naturale des Oyseaux' (Paris, 1645), p. 176.

‡ 'Practical Treatise,' by Bonington Moubray, fifth edition (London, 1824), p. 34.

* 'Ornamental and Domestic Poultry,' by Rev. E. S. Dixon (London, 1850), p. 75.

CHAPTER XIV

RACES OF DOMESTIC GEESE

Roman	Canadian
Embden	Russian
Toulouse	Egyptian
Saddleback or Pomeranian	Chinese
Danubian	African

THE geese generally found in Europe and America possess a remarkably uniform character, varying only to a very limited extent, less, in fact, than met with in any other branch of domestic poultry. Until a comparatively recent period there were practically only two breeds, the Grey and the White respectively, known in Europe. That was the case in Italy nearly 2,000 years ago, and so it continued during all the intervening centuries. Gervasse Markham, whose work on 'The English Husbandman' was published in 1615, says: 'Now, for the choyse of geese, the largest is the best, and the colour would be white or grey, all of one pair, for pyde are not so profitable, and blacks are worse.' 'Pyde' geese probably meant parti-coloured, like the Pomeranian, but blacks are now unknown, and it is probable that those referred to were a very dark grey.

Although within recent years additions have been made to the races of geese regarded as valuable for domestic purposes, there is very little development in respect to feather coloration, doubtless due to the homely garb of the parent stock, as whites and greys predominate. It is true that rather more coloration is found in African and Asiatic geese, but even with these we find a lack of that brilliancy of plumage which characterizes other races of poultry. In spite of the fact that the goose was one of the earliest fowls to be domesticated—for it was a sacred bird in Egypt 4,000 years ago—it has been modified to a comparatively small extent so far as external characters are concerned. This is probably due to the utilitarian nature of the birds, as they are useful rather than ornamental. Darwin emphasizes the fact* that 'hardly any other anciently domesticated bird or quadruped has varied so little' as the goose. Not only was it valuable for its flesh qualities, but to provide quills for writing. As Hehn says:* 'The first quill pens were used at the commencement of the Middle Ages, in the time of the Ostrogoth Theodoric. It is now supplanted by the steel pen, so that there are three great periods of such instruments—the earliest, lasting from the beginning of the art of writing among the Egyptians to the fall of the Roman Empire, being that of the split reed, used by Thucydides and Tacitus; the second that of the quill pen, with which Dante and Voltaire, Goethe, Hegel, and Humboldt wrote; and the third that of the steel pen of the nineteenth century.' Goose feathers have been valuable for the making of beds for 2,000 years. Below are the leading races known to us.

* 'Variation of Plants and Animals under Domestication,' by Charles Darwin, F.R.S. (London, 1885), vol. i., p. 302.

* 'Wanderings of Plants and Animals,' by Victor Hehn (London, 1885), p. 279.

ROMAN.

NOMENCLATURE: *English*, Roman; *French*, De Romagne; *German*, Italiener; *Italian*, Di Romagna; *Spanish*, Romana, or Italiana.
VARIETIES: White, Black and White.
CLASSIFICATION: Egg Production.
COLOUR OF FLESH AND SKIN: Creamy-white.
COLOUR OF LEGS AND FEET: Reddish-grey.
COLOUR OF EGG-SHELLS: White.

Observations made in various countries, and especially in Italy, have led us to the conclusion that some, at least, of our modern races of geese can trace their descent to the geese which were domesticated in the Italian peninsula several centuries before the commencement of the Christian era. Knowing the influence which Italian races of fowls have exerted in the evolution of many races, and that distribution has often followed political and military changes, to the dominion of the Roman arms and the commercial relationships of Italy with other parts of the Continent of Europe may be attributed the dissemination of the goose, modified by the domestication of the wild

species in the respective countries. Throughout South Germany, Austria, Hungary, and the Balkan States, we find almost universally a white goose, following the Embden in character, but much smaller in size, and consequently closely resembling the White Roman goose. Formerly it was thought that this was an Embden, and although, to secure improvement, specimens of that breed have been used, the conclusion we have arrived at is that it is descended from the Roman, and for that reason we have placed the latter first among the races under review, as it may be regarded as the oldest European breed. This is supported by the fact that in Mid and South-Eastern Europe parti-coloured geese, similar to what are called the Padovarno in Italy, are also occasionally met with.

Origin. — Upon this point there is no direct evidence, but that is scarcely to be expected in connection with a breed which has existed for twenty-three centuries. Among the ancient writers many references are made to geese in Italy before Christ. Hehn * says: 'Among the Romans perfectly white geese were carefully selected and used for breeding, so that in course of time a white and tamer species was produced, which differed considerably from the grey wild-goose and its descendants.' Homer, Livy, Lucretius, and other ancient writers, mention both white and coloured geese, and these birds were kept in the Capitol at Rome as sacred to Juno, which, as in Egypt, meant that the priests retained them as long as possible for their own use. The conclusion come to is that the Roman goose was obtained by selection when its wild progenitor, the Greylag, was captured and brought into the service of man.

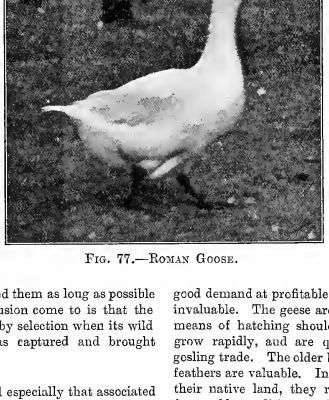


FIG. 77.—ROMAN GOOSE.

History.—The goose, and especially that associated with Italy, is famous for its preservation of the Roman Capitol during the siege by the Gauls, 365 B.C. The assailants in the night climbed to the summit in silence, not even alarming the dogs. 'They were not unperceived, however, by some geese, which, being sacred to Juno, the people had spared, even in the present great scarcity of food, a circumstance to which they owed their preservation, for by the cackling of these creatures and the clapping of their wings Marcus Manlius was roused from his sleep,'† and the Capitol was saved. From that time onward the goose has held a definite place in the affections of the Roman people, but in modern times it has not been bred to any great extent, as Mid and Southern Italy are not as suited to the production of fine flesh as are Lombardy, Piedmont, and Venezia, or the colder parts of Europe. We had not seen this race until our visit to Italy in 1903, when the Roman geese then met with led to the inquiry as to its distribution in Mid and South-Eastern Europe, and to the opinion that it is the progenitor of the race common in those countries.

Economic Qualities.—All the evidence goes to show that these birds are very precocious indeed, rapid in growth, and most prolific layers, and we suggest that the Roman would be a valuable breed both in England and America. A Belgian breeder who had tried the race for a couple of years, writing October 28, 1899,‡ says: 'I have a young Roman goose, hatched May 10, which commenced to lay September 6 (then at the age of four months), and which, until to-day, has laid twenty-two eggs — that is, twenty-two eggs in forty-nine days.' This is borne out by the experience of others, and it is stated that these birds will lay 60 to 110 eggs from October to June. For the production of early goslings, for which there is a good demand at profitable prices, such a breed should be invaluable. The geese are very late sitters, and other means of hatching should be adopted. The goslings grow rapidly, and are quickly ready for the green gosling trade. The older birds moult rapidly, and their feathers are valuable. In meat qualities, whilst dry in their native land, they rapidly improve under more favourable conditions, and they fatten extremely well, making up apparently in six months to 8 or 9 pounds, and three months later to 12 or 14 pounds, at which sizes they should find a good market. They are spleudid foragers, obtaining a large portion of their food.

Description.—The body is long and broad, with a well-developed sternum, and the breast broad but

* 'Wanderings of Plants and Animals,' by Victor Hehn (London, 1885), p. 279.

† Livy, lib. v., cap. 47.

‡ *Chasse et Pêche*, November 5, 1899, p. 95.

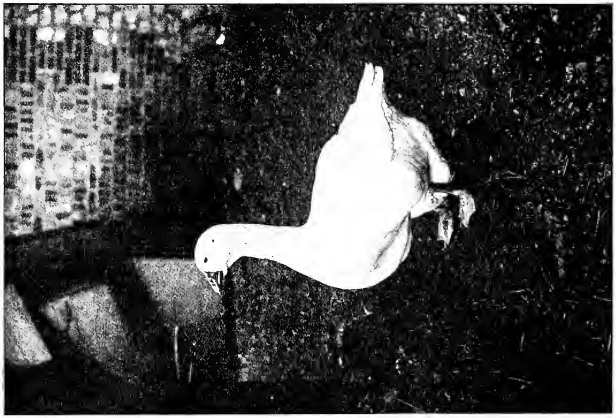


FIG. 79.—EMBDEN GOOSE.
Bred by the Hons. F. and S. Amherst, Didlington, Norfolk.

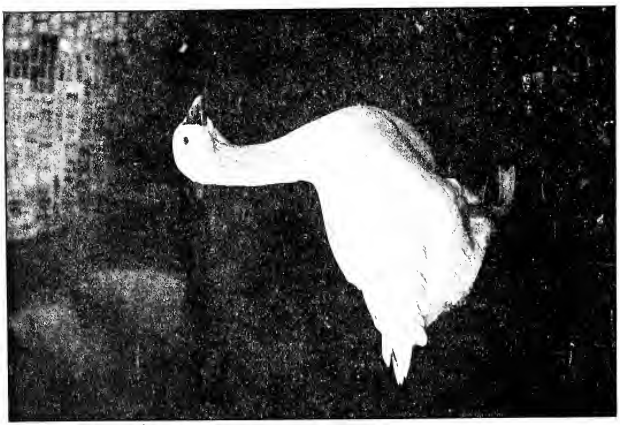


FIG. 78.—EMBDEN GANDER.
Bred by the Hons. F. and S. Amherst, Didlington, Norfolk.

not very prominent, thus following the Embden; back broad; neck very long, fine, and well arched; the head is fine, and in many there is a small crest at the back of the head; the eye is blue, surrounded with bare skin of pale yellow; the beak is very thick and short, orange-red, nearly rose in colour, with a tip of ivory white; the wings are large, but not carried as far back as the tail; the legs are strong, reddish-grey in colour, with white toenails; the general appearance is that of a broad and massive goose, but not so tall as the Toulouse or Embden. Weight: males, 10 to 14 pounds; females, 8 to 12 pounds.

Varieties.—Although in Italy the Roman and Padovarna are classified separately, they are evidently two varieties of one race, not two distinct breeds, and therefore we place them in the same category.

ROMAN (Fig. 77).—These are pure white in colour, close and compact in plumage, and with legs and beak as stated above.

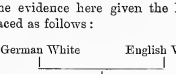
PADOVARNA.—In this variety the greater part of the body is white, but in the gander especially the head, back of neck, wings, and sometimes the back, are dark grey.

EMBDEN.

NOMENCLATURE: In all countries, Embden, Embdener, or Emdem.
VARIETY: One.
CLASSIFICATION: Table.
COLOUR OF FLESH AND SKIN: Creamy-white.
COLOUR OF LEGS AND FEET: Bright orange.
COLOUR OF EGG-SHELLS: White.

Origin.—White geese have been known for many centuries in Western Europe, produced either by sports from the Grey or by the introduction of Italians. The Embden, as we know it to-day, has not existed for more than 100 years. In the early part of last century white geese were common in Britain and in Ireland equally. It would appear that the influence which led to the improvement of that goose—for it is universally admitted that to English breeders the credit is due for the creation of this fine race—was obtained from Holland or Germany, where goose-breeding has been followed for a long period of time and on an extensive scale. The late Mr. Edward Hewitt stated* that he had 'traced the best specimens of this kind through several owners, and found that the originals (in these instances) came from Holland.' In the latest edition of Moubray† it is stated that 'the Embden takes its name from the Hanoverian town, whence it was, many years ago, imported, and whence, as also from some parts of Prussia and Holland, we still continue to draw supplies.' The fact of importations having been made is confirmed by Mr. Harrison Weir from personal knowledge. He says:* 'It is many years ago that a friend of mine, who had been some time living in Brunswick, informed me of the geese there attaining weights of much over 30 pounds, and he said the breed was also known and successfully reared in Hanover. All were white, and it was from these large birds that the goose hams were made. They were not there called Embden, but "Brunswick"; but that is now more than forty years ago.'

From the evidence here given the line of descent may be traced as follows:



recognising that by selection British breeders have fixed the character and size of these birds. In this connection it is of interest to note that many English Embdens are now exported to Germany for the improvement of the native breeds.

History.—How the name Embden came to be given there is no record, but probably stock were imported from that town and the term adopted to distinguish the strain from others. The first use of the name we have been able to trace was in 1838, after which time it became general. But at an earlier date geese of this variety were exported from Germany to America under the name 'Bremen,' by which they were known for a considerable period, the designation doubtless indicating the port whence they were shipped. In Britain and America alike they have won a great amount of favour for their economic qualities, and within the last thirty years the relative number bred has greatly increased, as they are quick in growth and excellent in flesh qualities. But for the enclosure of common lands upon which geese were at one time reared in large numbers by small farmers and cottagers, and the fall off in demand for this class of poultry, they would have advanced more rapidly.

Economic Qualities.—The Embden is very quiet in temperament and very amenable to control. The goose is an early layer, generally coming into profit in February, but as they are persistent sitters and mothers they do not lay as many eggs as the Toulouse, which is a non-sitter. The eggs are large, protected by a hard, thick shell. They will continue in profit for many years, but should not be used for breeding until they are two years old. The leading quality of the Embden is its rapidity of growth, which is an important point in its favour, more especially for the green gosling and autumn goose trade. Hence they can be brought into condition for killing cheaply, especially if fed off upon the stubbles. If kept until Christmas

* 'The Poultry Book,' by Wingfield and Johnson (London, 1853), p. 266.
† 'Domestic and Ornamental Poultry,' by Bonington Moubray, new edition (London, 1854), p. 297.

* 'Our Poultry,' by Harrison Weir, F.R.H.S. (London, 1902), p. 643.

they fatten up well and attain large size. They are hardy, good foragers, and will thrive upon poorer lands, where the Toulouse would not be profitable. The feathers are of greater value than those obtained from grey geese, which to some extent accounts for their popularity.

Description (Figs. 78 and 79).—The body is long, broad, and thick, with a massive breast, but not carried fully in front as in the Toulouse, in comparison with which it has a somewhat flat appearance; there is no sign of keel, and the body is tight and compact; the paunch and stern are full and deep; wings very large and powerful; neck long and fine, well arched; head straight, broad, and strong; bill thick at the base and short, in colour orange; dewlap or loose gullet should be apparent; the eye is large and full, and bright blue in colour; tail straight, rather short; legs and feet very stout in bone, with straight toes, and bright orange in colour; the plumage is pure white. Weight: in England, males, 25 to 30 pounds; females, 23 to 28 pounds; in America, males, 20 to 25 pounds; females, 18 to 23 pounds.

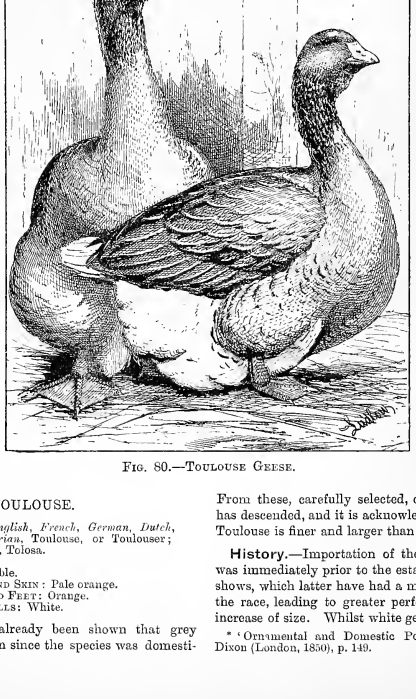


Fig. 80.—Toulouse Geese.

TOULOUSE.

Nomenclature: *English*, *French*, *German*, *Dutch*, *Danish*, *Hungarian*, Toulouse, or Toulouser; *Italian*, *Spanish*, Tolosa.
Variety: One.
Classification: Table.
Colour of Flesh and Skin: Pale orange.
Colour of Legs and Feet: Orange.
Colour of Egg-shells: White.

Origin.—It has already been shown that grey geese have been known since the species was domesticated, and records are given of its existence in Britain for centuries. All the earlier writers from Gervasse Markham refer to it; but it is evident that, whilst the 'grey' has been used in the production of the Toulouse as seen to-day, other influences were brought to bear in securing an improved size, and there can be little doubt that this was obtained from the South of France. In the early part of last century geese were largely bred in the Haute Garonne Department of that country, of which Toulouse is the capital, and even now the number kept there is greater than in any other French department save one. Dixon assumes* that the Toulouse goose 'is only the common domestic, enlarged by early hatching, very liberal feeding during youth, fine climate, and perhaps by age,' but this is not supported by the facts of the case, although the various influences named have each had their share in the evolution of our present stock. It would appear that in the fourth decade of last century the then Earl of Derby, for his famous menagerie at Knowsley, imported some improved grey geese, as did others, from Southern France. These were called at first Mediterranean or Pyrenean, but finally the term Toulouse was adopted. From these, carefully selected, our present-day stock has descended, and it is acknowledged that the English Toulouse is finer and larger than the French.

History.—Importation of the improved Toulouse was immediately prior to the establishment of poultry shows, which latter have had a marked influence upon the race, leading to greater perfection of type and to increase of size. Whilst white geese are more general

* 'Ornamental and Domestic Poultry,' by Rev. E. S. Dixon (London, 1850), p. 149.

than grey among practical poultry-breeders, the size of the Toulouse has led to its use for crossing purposes. Upon the Continent white geese are preferred, but in America and the Colonies the Toulouse is largely bred.

Economic Qualities.—The Toulouse goose is a good layer, but seldom becomes broody, and is not a reliable mother. Her eggs are very large, and generally white in colour of shell. The goslings are somewhat slow in growth, for which reason they should be hatched early, even for the Christmas trade, as they are of little use as green goslings or for early autumn. They thrive best upon richer soils, and are not as good in finding their living as the Embden. Properly treated, they develop big frames, and when fatted lay on a large amount of flesh; but it is somewhat coarse in texture as compared with some other breeds, and there is a large proportion of bone and offal. In fact, their looseness of skin and of feather and the frontal prominence gives them the appearance of greater size than is really the case, for frequently the Embden exceed them in actual weight at Christmas, and have the advantage of fitness for killing in the autumn, when the Toulouse would be in a raw, lanky condition. The heavy paunch is a mistake, as such birds make up loosely when killed. The Toulouse are heavy eaters, especially when undergoing the process of fattening. They are hardy, vigorous, and not disposed to wander far from home. For crossing purposes they are very valuable, and many of the best geese placed upon our markets are produced by Toulouse ganders mated with Embden geese.

Description (Fig. 80).—The body is long and very deep, carried low between the legs, and very prominent in front, having a keel almost level with the ground from breast to paunch; the paunch is very heavy and carried low; back broad and slightly curved, and shoulders broad; the neck is long and very thick; the head is broad and thick, and the bill, which is orange in colour, is strong, forming a uniform curve from point of bill to top of head; the eye is large, dark in colour; on the throat is a heavy dewlap, an undesirable point, often exaggerated in show birds, leading to weakness and disease, and indicating a loose skin; the tail is high and full; the legs are short, heavy in bone, and toes well spread, in colour orange; the back, wings, and thighs are of a dark, even steel-grey, each feather laced with a much lighter shade, almost pure white, except the flight feathers, which are of a solid steel-grey; the breast and under-parts are of a clear grey, lighter on the thighs, and the stern, paunch, and tail are white, with a band of grey across the tail. Weight: in England, males, 23 to 28 pounds; females, 21 to 26 pounds; in America, males, 20 to 25 pounds; females, 18 to 23 pounds. The general appearance is that of massiveness and great depth of body, but so much is loose feather and skin that for practical purposes better results would be obtained by selection of closer, more compact birds.

SADDLEBACK, OR POMERANIAN.

NOMENCLATURE: *English*, Saddleback; *German*, *Dutch*, Pommersche; *French*, Pomeraine; *Danish*, Pommerske; *Spanish*, Pomerana; *Hungarian*, Pomeränial.
VARIETY: One.
CLASSIFICATION: Table.
COLOUR OF FLESH AND SKIN: Pale orange.
COLOUR OF LEGS AND FEET: Orange-red.
COLOUR OF EGG-SHELLS: White.

Origin.—What were at one time called Saddlebacks in Britain have never received their due meed of consideration by breeders, and they are seldom mentioned in modern works on poultry. There can be little doubt that they are due to matings between the white and grey geese, but the characteristics are so far prepotent that in Germany they are given a distinctive place under the name Pomeranian. Geese of this type are very frequently met with in our own country, and personal observations made in many of the countries of Europe have shown that they are common. It would appear that the tendency to partial grey feathering is considerable. In some of the earlier works on poultry mention is made of what are called Mottled geese, by which name the Saddlebacks are designated. In the last edition of Moubray* it is stated that 'as we are satisfied that they are the production of the White (or Embden) with the Grey (or Toulouse), and have now very generally established themselves with us, it may be well, perhaps, to concede them the honour of a passing notice. In size they are of fair proportions, and differ but very slightly from those previously described, save in the plumage, in which white predominates, mottled in patches with a greyish-brown, only irregularly. The geese of this kind most valued, as well for their appearance as utility, are what have long been known and esteemed as "Saddlebacks," so called from a large broad patch of the dark feathering upon the back and wings.' In Germany this race has been bred for a long period of time, and it is generally acknowledged as the result of a cross between the White and the Grey.

History.—The Saddleback is one of those races which have been produced and bred entirely for utility purposes, and, regarded as a cross, has not received special attention. But the characters are more or less fixed, and it is worthy the recognition of all who are interested in profitable poultry. As already stated, it is widely distributed in European countries, but more especially Germany and the south-east.

* 'Domestic and Ornamental Poultry,' by Bonington Moubray, new edition (London, 1854), pp. 300-301.

Economic Qualities.—The Saddleback goose is a moderate layer, and a good sitter and mother. They are not very rapid in growth, but when fully developed carry a considerable amount of flesh on the breast, which meat is excellent in quality, fine in texture, and soft. They are very hardy, excellent foragers, and are specially suited for flat and low-lying lands, where they can wander at will. They go willingly into the water, which is necessary to them, and the breed is not to be recommended on high and dry lands.

Description (Fig. 81).—In shape the race follows closely the Toulouse, except that they are higher on the leg; body long, even, very broad, with a full, well-rounded breast and very deep behind; back broad, slightly arched; neck of medium length, strong, and carried erect; head broad, of medium length, and strong, with a thick, stout bill, almost in a line with the top of the head; the bill is orange-red in colour; tail broad, carried almost horizontally; legs stout with thick bone, of medium length, and toes slender; the colour of legs and feet is orange-red; wings powerful, full, but of medium length; the geese are generally pure white in plumage, but the gander has a grey head and neck, back and wings, in many cases the coloured feathers are spotted with white. Weight: males, 18 to 22 pounds; females, 15 to 20 pounds. These are for birds eight to nine months old, but older specimens often equal the Embden and Toulouse. In Germany and other Continental countries, however, huge geese are not bred, and as a rule stock males range about 16 to 18 pounds, and females 10 to 15 pounds, for reasons already explained.

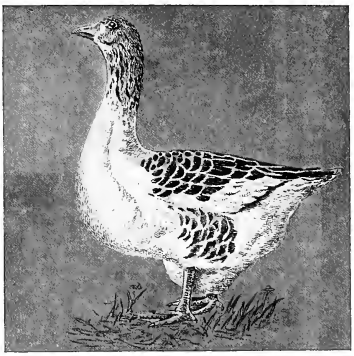


FIG. 81.—POMERANIAN GANDER.

DANUBIAN.

NOMENCLATURE: *English*, Danubian or Sevastopol: *French*, Frisee or Sebastopol; *German*, Lodengans; *Italian*, *Spanish*, Danubio.
VARIETY: One.
CLASSIFICATION: Table and Feathers.
COLOUR OF FLESH AND SKIN: Creamy-white.
COLOUR OF LEGS AND FEET: Red.
COLOUR OF EGG-SHELLS: White.

Origin.—We have been unable to obtain any reliable information as to the origin of this race of geese, which appears to be widely distributed in the countries surrounding the Black Sea. During visits paid to South-Eastern Europe and Russia we did not meet with any specimens, but found occasional instances of geese having looser feathers than the normal. That, however, is by no means uncommon in our own country. From the appearance it may be assumed that the Danubian is a variation from the ordinary white goose, perpetuated by reason of the larger amount of plumage, as feathers are relatively of greater value than in Western Europe.

History.—These birds were first seen about the time of the Crimean War, and the earliest specimens imported into England were received in 1859. Whether they came from the Sevastopol district there is no record, but that name was given to them. Later the term Danubian has been adopted. We have not had the opportunity of visiting Roumania and Bessarabia—that is, the delta of the river Danube—and are unable to say whether this breed is common there, but we know that goose-breeding is extensively followed. In England the race has not attained any great amount of popularity, but we have seen them frequently in Continental exhibitions.

Economic Qualities.—The Danubian goose is very quiet in temperament, indisposed to wander far, and as a consequence fattens very easily. At the same time, on suitable lands it finds a large amount of food. It is a moderate layer, but a very good sitter and mother. The flesh is excellent, and has that softness when fed off, without being greasy, which is always a recommendation for table geese. But in Western Europe the breed has not received adequate attention as practical birds. The feathers are very valuable by reason of their curl.

Description.—In body these birds are long in comparison with their depth, more like a duck, and they are very level with the ground; the neck is of medium length, fine for a goose; head like that of the Embden, except that the bill is rosy-red, as are the legs and feet; the eye is bright blue. The peculiarity of this race is that the wing and back body feathers are elongated, frequently trailing on the ground; the long feathers are very slender and often curled, and as they

are not webbed they have a somewhat draggled appearance, another result being that the birds cannot fly. They, however, are active walkers. Weight: males, 10 to 11 pounds; females, 8 to 9 pounds. In colour the majority of specimens are pure white, and they certainly are the more pleasing in appearance. We have, however, seen many specimens on the Continent of Europe in which grey or light brown patches were present. The colour of the plumage is very uncertain, and the Whites are due to careful selection. Among some of the earlier imported birds a few had a small tuft on the top of the head, and we are informed that many birds having that decoration are to be found in Southern Russia and Asia Minor.

CANADIAN.

NOMENCLATURE: *English*, Canadian; *French*, Cravate.
VARIETY: One.
CLASSIFICATION: Table
COLOUR OF FLESH AND SKIN: Creamy-white.
COLOUR OF LEGS AND FEET: Black.
COLOUR OF EGG-SHELLS: Dull yellowish green or white.

Origin.—The great naturalist Cuvier was doubtful as to whether this breed was related to the swan or to the goose, but that has been decided by interbreeding between the wild American and the domestic goose. It is an undoubted descendant of the wild-goose, which migrates from Central to North America in large flocks, and which at one time were shot by servants of the Hudson Bay Company in the Far North, to provide their winter supply of food. The wild specimens when wounded and captured have readily adapted themselves to domestication, and breed freely with the tame geese. What is now known as the Canadian is due to this crossing, but the characters of the wild-goose, very different from those found in Europe and Africa, have been maintained.

History.—The results of domestication are seen in the great increase of size, as the tame specimens are usually double the weight of their wild progenitors. This breed is kept to a greater extent in the United States and Canada than any other variety, although of late years the introduction of European and Asiatic geese has somewhat displaced it, more especially among breeders of high-class stock. It is by no means unknown in Europe, more especially upon ornamental waters.

Economic Qualities.—The chief value of the Canadian goose is for crossing to improve the vigour and flesh qualities of domesticated geese, as they have an abundance of highly-flavoured meat which is exceptionally fine in texture. They are very hardy and quick growers when bred in the ordinary manner, but retain a large measure of their wildness if bred pure, for which reason, in addition to enhanced size, it is preferable to use them as crosses.

Description.—The body is long and somewhat slender, with a full and deep breast, and long, rather narrow, but well-curved back; the neck is long, slender, and swan-like; head small, as is the bill, which is sharp at the tip, and entirely black; the eyes are full, black in colour; wings large and powerful; tail strong; legs long, with straight toes on the feet, and black in colour; the body colour is as follows: head, neck, wing primaries, and tail black; back and wings greyish brown, lighter at the edges; breast light grey; under-parts of body greyish white; flanks pale grey with white lines; in front of the neck around the throat and across the chin is a broad white band, which extends behind the eyes, giving to the bird the French name of Cravate. Weight: males, 12 to 16 pounds; females, 10 to 14 pounds.

RUSSIAN.

NOMENCLATURE: *English*, Russian; *Dutch*, Russische; *Danish*, Russiske; *Spanish*, Rusa; *Hungarian*, Orosz.
VARIETIES: Tula, Arsamas, Kholmogory.
CLASSIFICATION: Table.
COLOUR OF FLESH AND SKIN: Yellow.
COLOUR OF LEGS AND FEET: Dark orange-yellow.
COLOUR OF EGG-SHELLS: White.

Origin.—The first English reference we have been able to trace as to the fighting geese of Russia is in the eighth edition of Moubray's work on Poultry, in which he states* that at St. Petersburg 'they have no cock-pits, but they have a goose-pit, where, in the spring, they fight ganders, trained to the sport, and so peck at each other's shoulders till they draw blood. These ganders have been sold as high as 500 roubles each.' A short reference was made in Cornevin's work† to the Tula goose, under the term 'Race de Combat.' Our acquaintance with these birds, which are the most striking in individual character of the species, began in 1899 at the exhibition held that year in St. Petersburg. We have, however, been unable to obtain any information as to their origin, and until the study of poultry in Russia has advanced considerably, must remain content with leaving the question open. M. Houdekow says‡ 'the only established fact is that this race have been bred in Russia from a very remote period, and that they have preserved their typical and fixed character.' The conclusion is that the type is entirely artificial, and is not the result of natural selection, but of man's choice for his own sport.

History.—These fighting geese, by which is meant the Tula and the Arsamas especially, are bred in Mid-Russia to the south of Moscow, and in the neighbour-

* 'Practical Treatise,' by Bonington Moubray, eighth edition (London, 1842), p. 115.
† 'Les Oiseaux de Basse-Cour,' par Ch. Cornevin (Paris, 1895), p. 28.
‡ *Travaux du Congrès Internationale d'Aviculture*, 1899 (St. Petersburg, 1901).

hood of the Upper Volga River. Formerly they were kept to a greater extent than is now the case, as goose-fighting was a recognised sport, and the breeding of first-class specimens was a profitable pursuit, as was Game fowl raising in Britain until sixty years ago. With the prohibition of the sport, although there is a great amount of goose-fighting carried on surreptitiously in Russia, the reason for breeding such birds was removed, and less general attention paid to them. Hence their place has been to some extent taken by other races, but they are still carefully bred in a more limited number of hands, whilst their influence is seen in many directions. So far as known this class of goose is not to be met with in any other part of the world, is peculiarly Russian in character, and, as already stated, is artificial in its special characters, for although ganders are often good fighters, they are not naturally disposed to combat, except in defence of their mates or young. It is said that these birds are as keen for battle as are Game cocks, and that their mates will encourage them to redoubled efforts.

Economic Qualities.—Keeping in view that these races have been specially bred for fighting, it will be understood that weight of body and great strength of muscle are essential to success. Hence in developing the wings to enable birds to strike their opponents heavily the breast muscles must be increased accordingly, and thus, as in the case of the Game fowl, the table properties were enhanced, although there was no direct intention of securing that result. M. Houdekow refers to the fighting breeds as follows:*

'Our geese are indebted for their existence to the sport of goose-fighting; nearly all our races of geese are fighters. The principal quality which has secured their appreciation is the faculty of fighting each other furiously; until one of the combatants is dead the other will not leave the field of battle. These geese are not very productive. Thirteen eggs per annum is the usual record, but sometimes birds produce twenty eggs. These geese have remarkable endurance, and do not require any special food or care. Their flesh is of an excellent quality, is not fibrous, and is very fine in flavour. It is impossible to fatten fighting geese to the same degree as the Toulouse or Embden, but their flesh has a good taste, more like that of wild game. They are good sitters, and are very careful of their young, defending them against all species of birds and animals.'

Our observations in Russia support these remarks, except that for general purposes the flesh is hard, and they require to be well hung after killing before they are cooked. Thus they are chiefly useful for crossing, as in the case of the Game and Indian Game fowl, with soft-fleshed races, under which conditions the results are seen in an abundance of breast meat of a fine quality. Difficulties must necessarily arise in the case of birds in which the pugilistic nature is so highly developed, due to their quarrelsome nature, but where single males are kept for crossing that would be reduced to a minimum. The use of the Russian geese with some of our Western breeds is well worth a trial for the development of meat qualities.

Description.—All the races of Russian geese named above are very similar in general characters. The body is long, broad, and very deep, with a full, round, and massive breast, and a wide, flat, straight back; the neck is of medium length, very strong, and slightly curved near the head; the head is the peculiar feature of the breed, and entirely distinct from that of any other bird with which we are acquainted; it is short and nearly round, with a wide forehead and well-developed cheek muscles, and in older birds there are often two knobs or protuberances, which increase in size with advancing age, on the upper part of the skull; the bill is very short indeed, and stout at the base, the line of the upper mandible being in a line with the front of the head, which, together with the bill, is practically the same length as depth, in conformation resembling the head of a bull-dog. Beginning from the nostrils, the surface of the bill is ribbed, and the mouth, between the upper and lower mandibles, has a strange rounded appearance, seeming even when closed as if it were partially open; the colour of the bill is pale yellow, with an ivory tip; the eye is large, full, and nearly black, as a rule, but some specimens have grey or light blue pupils; the wings are very large and powerful, with strong shoulder muscles; the tail is short; the legs are of medium length, very strong, well set apart, with large round feet, and are in colour dark orange-yellow. From the above it will be seen that these birds are built upon powerful lines, and they are close and compact in plumage and firm in flesh.

Varieties.—It is evident that the three varieties are all of the same race, and we have, therefore, adopted the generic title of Russian for all.

Tula.—These birds are the best known, and are chiefly bred in the central districts of Tula, Kalonga, Tamboff, Kizan, Koursk, Vladimir, Nijni-Novgorod, and upon the borders of Oka and the upper parts of the river Volga. They are generally grey in plumage, but some are also clay-coloured. Weight: 13½ to 17 pounds.

Arsamas.—Pure, spotless white in plumage, and larger in size of body, as they range from 17 to 22 pounds.

Kholmogory.—This variety differs from the others in that they have a longer neck, and the bill is more natural, being of ordinary length; the upper line of bill is curved at the end, giving it a hooked appearance.

* *Travaux du Congrès Internationale d'Aviculture*, 1899 (St. Petersburg, 1901), p. 6.

They are also used for fighting, but not to the same extent as the Tula or Arsamas. This is the largest Russian race of geese, weighing 20 to 23 pounds.

EGYPTIAN.

NOMENCLATURE: *English*, Egyptian or Nile; *French*, d'Égypte; *German*, Nilgans; *Dutch*, Egyptische; *Danish*, Ægyptiske; *Italian*, Egitto; *Spanish*, Egipcio.
VARIETY: One.
CLASSIFICATION: Uncertain.
COLOUR OF FLESH AND SKIN: Dark.
COLOUR OF LEGS AND FEET: Yellowish-pink.
COLOUR OF EGG SHELLS: Grey or buff-white.

Origin.—As these birds are widely distributed in Africa, and may be found from Egypt to Cape Colony in a wild state, there is little difficulty in determining the origin of the domesticated race, as they are the replica of the wild species, which have been known on the Lower Nile for thousands of years. Representations are found among the monuments of ancient Egypt yet remaining on sarcophagi and tablets, showing birds as they are found to-day.

History.—In the long past the goose was a sacred bird in Egypt, and was, therefore, preserved for the use of the priests. In later periods the Egyptian goose was domesticated, and has proved fairly amenable to civilized conditions. It is, however, more kept for ornamental purposes than as a useful bird. It has considerable value for crossing purposes, more especially in the production of smaller geese, but upon that point experience is yet very limited.

Economic Qualities.—The Egyptian goose is a good layer, and breeds well in semi-confinement, but the ganders are very savage and do not consort amicably with other fowls; in fact, they appear to take a delight in annoying everything within reach, and the males will fight continuously if more than one are kept together. The goslings grow quickly, and the race is hardy in the extreme. The flesh, which is fairly abundant, is dark and high in flavour, improving when the birds have been bred and fed for two or three generations.

Description.—Among the various races of geese the Egyptian stands easily first for beauty of plumage. The body is long, but small and slender, with a round but not deep breast, and narrow, slightly arched back; the neck is medium in length and fine, head small and long, with a bill in keeping, usually purple or reddish-blue and with a grey tip; eyes orange, and around the eye is a ring of reddish-brown or chestnut, a band of the same colour passing down the nape of the neck; wings large, and armed with a short spur; tail full and stiff; legs rather long, in colour yellowish-pink, with straight toes; in colour the breast and under-surface are a light iron-yellow sprinkled with brown, except the abdomen, which is white; the back and inner wing feathers grey marked with black; flights and tail black or metallic green, the former having a rich narrow bar; the neck is grey and black with a clear ring of reddish-brown. Weight: males, 8 to 10 pounds; females, 6 to 8 pounds. In carriage this breed is upright and graceful.

CHINESE.

NOMENCLATURE: *English*, Chinese; *French*, Guinée; *German*, Hockergans; *Dutch*, Chineesche; *Danish*, Kinesiske; *Spanish*, China.
VARIETIES: White, Brown.
CLASSIFICATION: Table.
COLOUR OF FLESH AND SKIN: Yellowish.
COLOUR OF LEGS AND FEET: White, orange; Brown, dusky-orange.
COLOUR OF EGG-SHELLS: White.

Origin.—The breeding of geese is very extensively practised in China, but our information as to the races to be found in that country is very scanty indeed, and does not extend beyond that designated as the Chinese. Mr. Lewis Wright says* that 'the original Chinese variety ranges all over China, much of Siberia, and most of India, but chiefly Northern India.' He does not, however, give any authority for this statement, but probably follows Cuvier, who called it the Swan goose, and said that it is met with frequently in the neighbourhood of Tartary and China. It was called Siberian by Linnæus. Other naturalists have testified that most of the geese met with in India owe much to the influence of the China goose, or, to give it the scientific term, *Anser Cygnoides*. It is probably of an ancient race, and was domesticated by the Chinese many centuries ago, who have bred it on the lines of the wild species. There is no reason to suppose that it has been modified more than would be usual under domestication, or that any other influence has been introduced.

History.—The attention of breeders was first called to this race by the Rev. E. S. Dixon, who stated that in 1848 Mr. Alfred Whittaker, of Beckington, Somerset, owned a flock of the White variety, which 'were from imported parents, and were hatched on board ship from China';† and also that another breeder in the same county had a number of specimens. But it is evident that the China goose was known for a long time previously under other names, as it was referred to by Buffon, Cuvier, Bewick, etc., and possibly by Willughby.

As Dixon says:‡ 'It has enough names to fill a menagerie — China goose, Knob goose, Hong-Kong goose, Asiatic goose, Swan goose, Guinea goose, Spanish goose, Polish goose, Muscovy goose,' and,

* 'New Book of Poultry,' by Lewis Wright (London, 1902), p. 564.
† 'Ornamental and Domestic Poultry,' by Rev. E. S. Dixon (London, 1850), pp. 88 and 115.
‡ *Ibid.*, p. 88.

as we have already seen, Siberian goose. Willughby stated that in the seventeenth century it was usual to apply the term 'Guinea' to everything of foreign and uncertain origin. We know that Spanish, Turkish, Indian, were all applied in the same reckless manner at different periods. It is evident, however, that in these references to China geese what we now term the African was included, for Dixon was told by the head keeper of the Zoological Society in 1848* that there were three varieties—namely, the White and two types of Browns.

For various reasons the China goose has never been adopted for practical purposes to any extent in Europe, but it has become fairly popular in America, the first importations into that country having been made about thirty years ago. They have proved profitable where a smaller-sized goose is demanded upon the market.

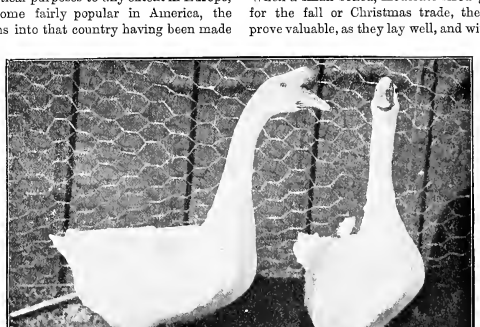


Fig. 82.—White Chinese Geese.

Economic Qualities.—The Chinese goose is regarded as an excellent layer. In an American report it is stated that† 'the Brown and White Chinas are early and prolific layers of fair-sized eggs. If well fed they not infrequently lay in the autumn months, but generally those which do so lay later and fewer eggs the following spring. At the Experiment Station in 1896 and 1897 the White Chinese laid in every month from January to June inclusive, while the Brown Chinas did not begin laying until February, but continued laying freely into June.' The highest records were fifty eggs from one White goose and 42 from a Brown goose. The eggs are not so large as those obtained from Embden or Toulouse. It is claimed by some breeders that the flesh qualities are equal to those of other races of geese, but this does not appear to be warranted. In the report already referred to it is stated that* 'China geese are not favourites with those who raise goslings for sale to poultrymen, who fatten them and put them on the market as green geese. They are too small to be profitable for such a market. When a small-boned, moderate-sized goose is required for the fall or Christmas trade, these breeds would prove valuable, as they lay well, and with proper care in selecting breeding stock large birds should be raised. The Brown Chinese especially seem very vigorous, hardy, and active, but pick hard, and require care in dressing to look well. The White China . . . is usually not so difficult to pick, and handsomer in appearance when dressed.' Their chief value is for crossing, to produce a smaller-sized goose to meet the requirements of the autumn market. We have previously stated† that 'were smaller birds produced (and there is no reason why they should not be as profitable as the larger), these would be bought more readily, and it would be possible to create a desire for them on the part of the consuming public. A fleshy, compact,

* 'Ornamental and Domestic Poultry,' by Rev. E. S. Dixon (London, 1850), p. 121.

† Rhode Island Experiment Station Report, 1897, p. 436.

* Rhode Island Experiment Station Report, 1897, p. 437.

† *Journal of the Royal Agricultural Society of England*, vol. x., part ii. (1899), p. 350.

good bird of 8 pounds to 10 pounds would be finer in meat qualities, and during the 'green goose' and autumn seasons would meet an inquiry which might grow to a very large extent, touching a class which at present does not enjoy the luxury of this fowl.' For that purpose the Chinese goose is very suitable. These races are very hardy, and make good sitters and mothers, but are rather quarrelsome, and have a somewhat unpleasant cry.

Description.—The body is of medium length, round, plump, and is carried upright, the chest being well elevated; the breast is round and fairly full; neck long and well arched; head carried well forward, and is large and long, with a large knob at the base of the bill; the bill is stout and of medium length; eyes large and bright; tail hard and stiff; wings large, well folded; legs medium in length, with long, straight toes.

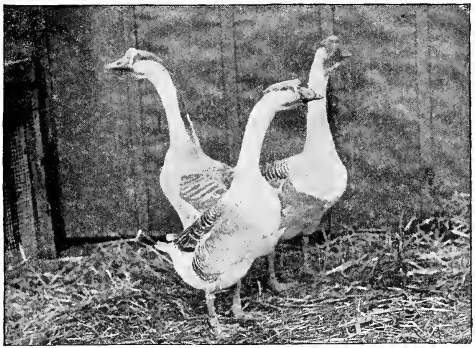


FIG. 83.—BROWN CHINESE GEESE.

Weight: males, 12 to 16 pounds; females, 10 to 14 pounds. In Europe dewlaps are permitted, but not in America.

Varieties.—The two varieties are very uniform, except in coloration of plumage. Both have a large dewlap, or folded skin, under the throat, as in the Toulouse.

WHITE (Fig. 82).—The plumage is pure white, except that there is often a colour stripe from the head to the body; the bill, knob, and legs are orange in colour, and the whole appearance is very pleasing.

BROWN (Fig. 83).—The body colour is a greyish brown, shading to white or very light grey on the abdomen; the head is dark brown, and the front of the neck and breast a yellowish-grey or brown, with a very dark brown stripe passing from the back of the head down the neck to the body; the wings and tail are dark brown; the bill and legs are dusky orange, and the knob black or dark brown.

AFRICAN.

NOMENCLATURE: *English*, African; *Dutch*, Africaansche *Danish*, Africanske; *Spanish*, Africano.
VARIETY: One.
CLASSIFICATION: Table.
COLOUR OF FLESH AND SKIN: Yellow.
COLOUR OF LEGS AND FEET: Dark orange.
COLOUR OF EGG-SHELLS: White.

Origin.—This race has been made known by American breeders, who have exalted it to a separate position from the Chinese. In spite of the fact that claim has been made for it as a distinct breed, on the ground that it is first supposed to have been imported from Africa, that it is said to be bred in the neighbourhood of Zanzibar, and that possibly the name 'Guinea' given to the Chinese may have had some justification, it cannot but be regarded as a descendant of the last-named breed, as there is not the slightest proof of the distribution of either wild or tame members of the family on the African continent. It is essentially Chinese in character, varying principally in size, and may be regarded as a descendant of the Brown Chinese goose, but has probably been crossed with some other and larger variety, such as the Toulouse. Our opinion is that the African was originally the Brown Chinese, that it was taken to Africa by trading-ships, and after-

wards to America. Whether the crossing to secure increased size and thicker body took place in Africa or America we do not know; probably the latter. Hence the table of descent would be:

Brown Chinese (?) Toulouse
African.

History.—Whether Buffon's 'Spanish' goose and those variously designated by other writers were Chinese or African, or both, it is difficult to determine. Both were probably referred to by naturalists, for, as we have seen, in 1848 in England three types were found of what were named the Chinese. The first reference met with is in an American work published pure bred were called by that name. He next found geese landed by a Provincetown (Massachusetts) vessel, and said to have come from Africa. These birds were scattered about the section west of Boston, and were called Africans, and exhibited under that name.' Up to the present they have not attained any great measure of popularity, and we have not seen any in Europe.

Economic Qualities.—Evidence as to the productiveness in respect to eggs is very conflicting; but in the Rhode Island experiments, 1897, the highest record was twenty-two and the lowest fourteen. The eggs are larger than from the Chinese. Their chief point is flesh quality, as they grow rapidly, make

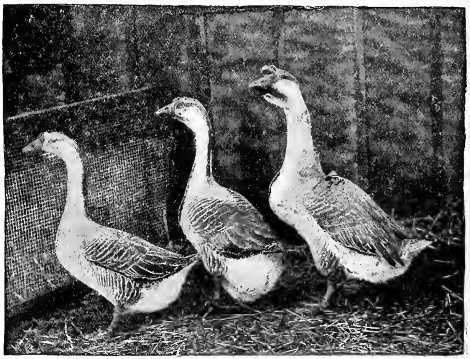


FIG. 84.—AFRICAN GEESE.

in 1845,* where the term Guinea or African was used, and from the description it evidently relates to what we now call the African, in that it is stated that the breed 'is the largest of the goose tribe . . . and it often weighs more than 25 pounds.' Further interesting facts are given in the report already quoted.† It is recorded that Mr. William Rankin, of Brockton, Massachusetts, states that he first knew of the African in 1859, when some were landed at Essex, Massachusetts, U.S.A. 'What he learned from persons who had them led him to believe that they came from Hindustan, and he called them India geese, and all excellent green goslings, and fatten to a great size for the winter trade. They are hardy, of a quiet, mild disposition, and contentedly accept restricted conditions when put up for feeding.

Description (Fig. 84).—The body is long, large, and deeper than the Chinese, whilst not carried so erect, following the Toulouse shape; neck moderately long, fairly thick, and well curved; head large, with a long, stout bill, which is black, as also the prominent knob at its base; wings large and powerful; legs stout, of medium length, dark orange in colour, with black nails on the toes; the colour of body on the back, wings, and tail is dark grey; on the breast and under-parts light grey; the neck is light grey, with a dark brown stripe from the head down the back of neck to body.

* 'American Poulterers' Companion,' by Mr. Bement (1845), p. 271.

† Rhode Island Experiment Station Report, 1897, pp. 432-433.

CHAPTER XV

RACES OF DOMESTIC TURKEYS

Black	American Bronze
White	Naragansett
Grey	Fawn
Cambridge Bronze	Ronquières

AS already seen, the Turkey was indigenous to America, and was unknown elsewhere until the discovery of the mainland of the Western continent in A.D. 1518. The first actual records show that it was introduced into Spain about 1524. One French writer* says that the first importation into France was in 1518, but gives no authority for that statement. For reasons given above that cannot be accepted, although, from the records of an expedition to Central America and Mexico by Bernal Dias de Grijalva, it is possible that specimens were received in Spain that year. When we keep in view the maritime intercommunications between Spain and England, it is evident that the introduction into Britain was accomplished soon afterwards.

John Walcot, whose work on British Birds was published in 1789, states that the turkey was brought to England in 1521. Dixon† gives the date as 1524, which is generally recognised as correct. Martin Doyle says‡ that, 'according to the "Norfolk Archæology," an ancestor of Sir George Strickland, Bart., first brought it into England, and the crest (grant of arms given to William Strickland by Edward VI. about 1550) of this family is a turkey cock in his pride "proper." . . . In 1541 Archbishop Cranmer prohibited the appearance at table at State festivals of more than one dish of turkey cocks; the female was too precious to be cooked at that period. Fourteen years later two turkeys and two turkey poults were served up at a grand law dinner. Twenty years afterwards the turkey became a Christmas dish with the farmer.'

* 'Les Oiseaux de Basse-Cour,' par Rémy Saint-Loup (Paris, 1895), p. 294.

† 'Ornamental and Domestic Poultry,' by Rev. E. S. Dixon (London, 1850), p. 35.

‡ 'Illustrated Book of Poultry,' by Martin Doyle (London, 1854), pp. 206-207.

Upon this question, however, there is a considerable amount of doubt, for there is no mention in Sir Anthony Fitzherbert's 'Boke of Husbandry' of the turkey, although other classes of poultry are referred to; perhaps it would be too soon for recognition as a regular dish. That the race spread rapidly appears to be unquestionable, for old Tusser, writing in 1573 of the Christmas fare of the period, says:

> 'Beef, mutton, and port, shred pies of the best,
> Pig, veal, goose, and capon, and turkey well drest.'

And Barnaby Googe, in 'Four Books on Husbandry,' in 1578, says: 'Turkey cocks we have not long had among us; for before the year of our Lord 1530 they were not seen with us, nor, I believe, known to the old writers.'

Gervasse Markham, in 'The English Husbandman,' published in 1615, deals with the turkey as a recognised member of the poultry-yard. It is evident that the turkey spread rapidly over Europe. There is considerable doubt as to when it was introduced into France, but probably about the same time as received in England, though the suggestion has been made that they were introduced about 1540 by Philip de Chabot, Admiral under Francis I. Belon's description was published in 1555.

An interesting account has been given as to the introduction of the turkey into France:* 'The first turkey was eaten in France on June 27, 1576, at the wedding-feast of Charles IX. and Elizabeth of Austria. A large number of these birds had been sent over from Boston to St. Malo, and when the ship reached that port the provincial Governor despatched a dozen of them to the chef of the King's kitchen, thinking that they would be a welcome addition to the Royal table. These twelve turkeys were

* *Live Stock Journal*, January 14, 1881, p. 37.

stuffed and served on the spits, like so many larks, and the great dignitaries of the Court, as well as the Cardinal de Lorraine and the Queen-Mother, eat so much of them that they all had an attack of indigestion. Charles IX. was so pleased with them that he began to breed turkeys in the forest of St. Germain, and his example was soon followed by many of the great landowners.'

However true this record may be as to the King's feast, for reasons already given it is evident that the turkey was known in France several decades prior to 1576. In Italy the first recorded account is that of the year 1556, when an ordinance was issued by the magistrates of Venice repressing the luxury, and about 1570 Bartolomew Scappi, cook to Pope Pius V., published several recipes for cooking them. It is further stated that they were first introduced into Germany in 1580.

Our task with the various races of turkeys is simple, by reason of the fact that the turkey was already domesticated when first imported into Europe, and the variations are due to change of conditions or to the perpetuation of sports. From the adaptability of the species, and that there are practically no references in earlier writings as to any difficulty in keeping them under ordinary conditions, we are led to the conclusion, as shown in Chapter I., that they had already been domesticated for a considerable period of time before the discovery of America. It is easy to understand how a large bird like the turkey would rapidly grow in favour, as they were distinct in that respect, and also in the quality of flesh, to any race then known.

BLACK.

NOMENCLATURE: *English*, Black Norfolk; *French*, Dindon Noir; *German*, Truthühner Schwarz; *Dutch*, Kalkoenen Zwart; *Danish*, Kalkun Sorte; *Italian*, Tacchini Nigripennia; *Spanish*, Negra de Pavos; *Hungarian*, Pulyka Fekete.
VARIETIES: Black, Norfolk Black.
CLASSIFICATION: Table.
COLOUR OF FLESH AND SKIN: White.
COLOUR OF LEGS AND FEET: Slaty-black.
COLOUR OF EGG-SHELLS: Cream, speckled with brown.

Origin.—The Mexican turkey, whilst it cannot be termed black, for there is a considerable amount of brown in the plumage, is decidedly dark in colour, and has a constant tendency—as, in fact, have the Bronze—to black feathers, more especially under new conditions. As there was no other species or race with which the early imported turkeys could be crossed, we can but suggest that the tendency already mentioned explains the origin of the Black turkeys, which are widely distributed over the greater part of Europe. It is more than probable that the earliest importations were dark in plumage; perhaps even selection for that colour had been followed in Central America before the discovery of that country; or at an early period the superiority of the Black turkey in flesh qualities, as is the case to-day to a large extent, was recognised, leading to choice of specimens of that colour for breeding; or the evident predilection of the Spaniards, as seen in their races of fowls, for black-plumaged poultry may have had an important influence in making turkeys of that hue almost universal throughout European countries.

History.—In the absence of any definite information as to the distribution of Black turkeys during the past centuries, facts must be accepted as they now are. Señor Castello* says that the Black variety is chiefly found in Andalusia and Castile. In Northern France many of the turkeys are black. At one time throughout East Anglia what were called the Black Norfolk were common, and evidently had been bred there for a very long period. Their place has been taken by the American Bronze, due to the greater size and vigour of the last-named breed. In other Continental countries than those already named Blacks are very general, more especially in Germany, Austria, Hungary, and the Balkan States. These are often called Bronze, but personal observations have shown that they are much more nearly allied to the Black than to the Bronze American. Eastern European turkeys are, as a rule, much smaller in size than those found in Western countries and in America, and it would appear that diminution of size has been greater the further the species has travelled from its natural habitat.

Economic Qualities.—It is generally admitted that the Black turkey is one of the finest for table qualities, yielding a large amount of beautifully white, soft flesh, and is very fine in flavour, whilst its lightness of bone is a distinct advantage. These—as, in fact, all—qualities are due in large measure to the conditions under which they are produced. The finest specimens of Blacks have been met with on the rich lands of Eastern England, and of Normandy, in France, where soil, climate, and natural food are all conducive to quality of flesh. In Mid-Europe they are smaller in size and not so good in flavour of flesh, whilst in South and South-Eastern Europe in both directions there is a marked deterioration. Of the Blacks, the French are much the hardier, whilst the Norfolks have almost become extinct, and where found are delicate in constitution, probably due to inbreeding and the use of immature birds for stock purposes. The hens are good sitters and mothers and fair layers.

Description.—This race is long in body, which is very deep from back to breast, and massive, very full and round in front, with a broad back, which is curved, highest in the centre, but the stern is always lower than the shoulders; the neck is long and curved, carried well back; the head is long and broad, and

* 'Avicultura,' par D. Salvador Castello y Carreras (Barcelona, 1899), p. 648.

what is known as carunculated, which means that the head and upper part of the neck is bare of feathers, the skin wrinkled, and formed into wart-like elevations. From the base of the upper mandible springs a fleshy protuberance capable of elongation, with a few hairs at the tip, and taking the place of a comb, as seen in the domesticated fowl. The head is blue on top and at back, and face, wattles, and carunele bright red. The beak is stout and well curved, dark horn in colour; eye full and dark hazel; the wattles are full, round, and pouch-like; the wings are very large, long, and powerful, carried low in the male; the tail of the male is very large, and spreads out like a fan: that of the female is long but compact; legs and feet are stout and strong, but not heavy in bone, and, with the toes, are long, in colour dark lead or slaty-black. Weight (in England and France), for fully-grown specimens: males, 20 to 22 pounds; females, 12 to 14 pounds.

Varieties.—Whilst all the Blacks are allied, there are differences which require to be mentioned.

FRENCH.—These are of a deep, even, glossy black throughout, without any white or brown tips, and during the breeding season they are very handsome.

NORFOLK (Fig. 85).—It is generally stated, although some older writers do not agree in this respect, that the Norfolk Black is dull in colour, without any sheen. The chief difference between these and the French is that some of the feathers of the tail and on the back have brown, or even white, tips, probably due to influences to be noted later. For the resuscitation of this old breed the French Black would be very useful.

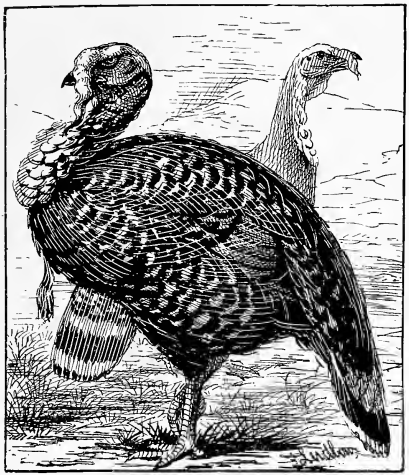


FIG. 85.—NORFOLK BLACK TURKEYS.

WHITE.

NOMENCLATURE: *English*, White; *American*, White Holland; *French*, Dindon Blanche; *German*, Virginische; *Dutch*, Wit; *Danish*, Hvide; *Italian*, Tacchini Bianchi; *Spanish*, Blanca; *Hungarian*, Fehèrpulyka.
VARIETY: One.
CLASSIFICATION: Table.
COLOUR OF FLESH AND SKIN: Reddish-white.
COLOUR OF LEGS AND FEET: Pinkish-white.
COLOUR OF EGG-SHELLS: Cream, speckled with brown.

Origin.—Given black-plumaged birds as the basis, it is easy to explain the origin of the White Turkey, as there is always a tendency by failure of pigment to white in all black-feathered birds. Many instances can be given of such variations within recent years, but it is unnecessary to deal with them in detail. Tegetmeier says:* 'It is well known that most birds, wild as well as tame, occasionally produce perfectly white individuals of more delicate constitution than the parents. There can be no doubt that the selection and pairing of such is the way in which the breed of white turkeys has been established and kept up.' This writer mentions the frequent production of ticked or speckled specimens in flocks of Whites, and an American breeder, Mr. J. A. Leland, says:† 'As to colour I have never seen a White Holland turkey that did not show some black ticking in its plumage during some period of its life,' which is a further evidence of the origin.

History.—White Turkeys appear to have been known for a long period of time, as Moubray and other of the earlier writers refer to them, and that

* 'The Poultry Book,' by E. W. Tegetmeier, F.Z.S. (London, 1873), p. 322.
† 'Turkeys, their Care and Management' (Quincey, Illinois, U.S.A., 1901), p. 72.

author states that they are said to have been originally imported from Holland.* The countries where they are found are France, Austria, and Hungary. In the South of France, more especially in Languedoc, Provence, etc., they are almost exclusively kept, and are there regarded as hardy and of fine quality. Mr. Lewis Wright mentions † that 'the Whites are often mentioned as Austrian Whites—why we do not know, as they can be traced back in England for over 100 years.' Our personal observations in that country, as in Hungary, prove their wide distribution, and the above name may be attributable to some special importation. In America the White Holland, as it is called —probably owing to birds having been taken from the Low Countries to the States—has a limited amount of favour, but in England they are kept chiefly for ornamental or exhibition purposes. The finest display we have ever seen was at Pozsony, Hungary, in September, 1902, when it was learnt that the white plumage explains their popularity; and a later visit to that country (1904) gave further proof that they are largely kept in one or two districts.

Economic Qualities.—In France it is claimed that the Whites are equal to all others for flesh qualities, but in Hungary we obtained the opinion of a large dealer that they do not kill or dress as well as those with dark feathers. The English experience is not at all reliable, as the breed is not kept for market purposes. They are regarded as specially delicate here—not, we think, because of the colour of plumage, but for the reason that inbreeding and preparation for exhibition has debilitated the stock. The Hungarian view is that they are equally hardy with the Blacks. The hens are fair layers, and good sitters and mothers.

Description (Fig. 86).—The general characters are as in Blacks, excepting the beak, which is flesh-coloured with a pink tinge, and the legs and feet, which are pinkish-white; the plumage is a glossy white, with the faintest indication of blue, thus proving that they are not mere albinos. The beard, or tuft of feathers on the upper part of the breast, found in turkey cocks, is black. Thus the effect of contrasts in plumage and head and neck is very pleasing, and there can be no question that this is the most ornamental of the turkey family. Weight: males, 16 to 26 pounds; females, 10 to 16 pounds, but the heavier birds are not common abroad.

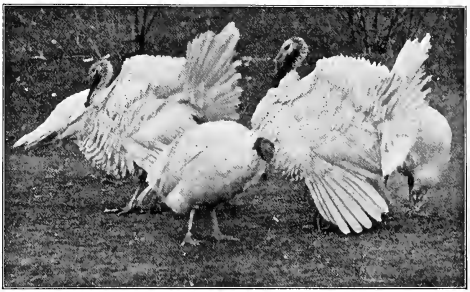


FIG. 86.—WHITE TURKEYS.

* 'Practical Treatise,' by Bonington Moubray (London, 1824), p. 24.

† 'New Book of Poultry,' by Lewis Wright (London, 1902), p. 519.

GREY.

Grey-feathered turkeys have been known for almost as long a period as any other colour, as might be expected where Blacks and Whites are bred, but they have never assumed definite characters, and cannot be regarded as a distinct race. Among older writers frequent references are made to Grey birds of this species, and it would appear that they were common in Cambridgeshire. One writer* says, speaking of turkeys in Norfolk, 'When grey they are called the Bustard breed.' In the South of Ireland many of the turkeys are distinctly grey in plumage, and the wonderful quality of flesh upon them, probably the finest in the world, causes the inquiry why Irish breeders do not attempt to fix the characters and

* 'The Poultry Book,' by Wingfield and Johnson (London, 1853), p. 244.

elevate their turkeys into a race. Then the Erin turkey would command a high position; but increase of size would be an essential point, for the present race is distinctly small. Italian turkeys are largely grey in hue. They are even smaller than the Irish, and, so far as our experience goes, dry and insipid in flesh, due to the conditions under which they are bred, and the intense heat of Eastern and Southern Italy. Turkeys with bluish or slate-coloured feathers are often met with, more especially upon the Continent, as might be expected where Greys or Blacks are common, and occasionally we have seen very pretty specimens. These variations are interesting, but at present of no practical value. Better results would be obtained by perfecting the Grey turkey than attempting to secure slate-blue or Andalusian plumage.

Dixon says* that 'the plumage of the Cambridge breed varies very much; sometimes it is entirely made up of shades of reddish-brown and grey . . . sometimes of grey, black, and white, but frequently it approaches very near to what we see figured as the wild bird.' It is stated by Wingfield and Johnson† that 'they vary in colour, being grey, pied black and white, and rusty brown. . . . The grey breed is the one most common in Cambridgeshire, being considered hardier than the others. Attempts have been made to cross this breed with the white and black breeds; but in every instance within my knowledge those attempts have signally failed. As a proof of the excellence of the Cambridgeshire turkey, it may be remarked that that county has for several years past supplied the Royal table on Christmas Day.' In the 1854 edition of Moubray

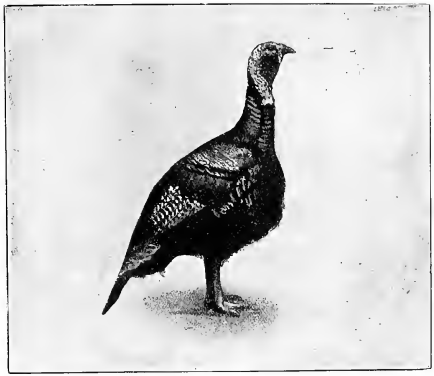


FIG. 87.—CAMBRIDGE BRONZE TURKEY.
Bred by Cage Harper, Raydon, Essex.

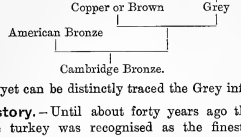
CAMBRIDGE BRONZE.

NOMENCLATURE: *English*, Cambridge Bronze; *French*, Dindon de Cambridge; *Dutch*, Cambridge Brons; *Danish*, Bronse-farvede Cambridge; *Spanish*, Cambridge Bronceada; *Hungarian*, Cambridgei Bronz.
VARIETY: One.
CLASSIFICATION: Table.
COLOUR OF FLESH AND SKIN: White.
COLOUR OF LEGS AND FEET: Dark grey.
COLOUR OF EGG-SHELLS: Cream, speckled with brown.

Origin.—Cambridgeshire has been as famous for its turkeys as Norfolk but the character of the race bred in the two counties has differed considerably. mention is made of Grey, of Copper, and of Brown turkeys as all to be found in Cambridgeshire. After the period named, either by crossings of American Bronze, or more careful selection of darker-plumaged birds, they assumed more or less of a Bronze character, as in 1865 the Cambridge turkeys exhibited were of a dull bronze. Then came the demand for size and greater vigour, and the Americans were freely used for breeding.

* 'Ornamental and Domestic Poultry,' by Rev. E. S. Dixon (London, 1850), p. 36.
† 'The Poultry Book,' by Wingfield and Johnson (London, 1853), p. 244.

The following table of descent may be regarded as representing the development of the present-day birds:



Even yet can be distinctly traced the Grey influence.

History.—Until about forty years ago the Cambridge turkey was recognised as the finest of the larger races, and it yet holds the premier position in that respect, although it is not bred so extensively as formerly. But it is unequalled upon the markets. It is seldom seen in exhibitions of live poultry, the more homely garb of this race looking dull beside the American Bronze; consequently, the latter generally secure the leading prizes.

Economic Qualities.—Amongst practical poultry-breeders the Cambridge Bronze is regarded as the most profitable to keep, as it is comparatively light in bone, and is abundant in flesh; although not so large in frame as the American, they fatten better, producing soft flesh of great thickness on the breast, beautifully white in colour. In dead-poultry shows they generally stand first for quality. They look very plump, as there is not the prominence of breast-bone found in other breeds. The largest dead specimen we have ever seen was a Cambridge, weighing 33 pounds, and it was tender as a chicken, without the heavy bag in front which spoils so many turkeys. Essentially it is a practical fowl, but we do not think it quite as hardy as the American Bronze. Turkey-breeders whose object is to produce for the Christmas markets find it the most valuable race either pure or as a cross. The hens are good layers, and excellent sitters and mothers.

Description (Fig. 87).—The type is that general to the species, except that the Cambridge is not so long in body, but is deep and massive; the plumage is of a dull bronze, with grey and white tips to the body feathers, and bars on the wings and tail of the same colours; the beak is flesh-coloured, and the legs and feet dark grey; in size these birds do not equal the American, but lighter frame is an advantage when the birds fatten up to market requirements. Males, 18 to 24 pounds; females, 12 to 16 pounds.

AMERICAN BRONZE.

NOMENCLATURE: *English*, American Bronze; *French*, Dindon Bronze et Cuivres; *German*, Broncefarbig; *Dutch*, Amerik Brons; *Danish*, Amerikanske Bronsefarvede; *Italian*, Selvaggia d'America; *Spanish*, Bronceada Americana; *Hungarian*, Amerikai Bronz.
VARIETY: One.
CLASSIFICATION: Table.
COLOUR OF FLESH AND SKIN: White.
COLOUR OF LEGS AND FEET: Very dark, or flesh-coloured.
COLOUR OF EGG-SHELLS: Cream, speckled with brown.

Origin.—Since the settlement of what is now known as the United States and Canada, the turkey has been a favourite fowl in those countries, so much so that Benjamin Franklin, on the separation of the North American States from the British Crown, desired it to be made the national emblem rather than the eagle. What the exact type of turkey bred under domestication 100 years ago was we cannot tell, but it is more than probable that there has been a constant infusion of wild blood, as would be possible in America, but in process of time that will no longer be so. Mr. H. S. Babcock states* that 'there is reason to believe that it [the American Bronze] resulted from crossing the wild turkey—the original of all the domesticated varieties — upon the Black turkey. Early references to the variety show that it was at first known as the "Black Bronzed," but the term was too long, and it was shortened into Bronze. This variety is interesting as showing that, after a marked departure from the early colour, it has come back to very nearly the colour of its wild original. The Black had departed a long distance from the rich hues of the wild turkey, but the lines are restored in the Bronze variety.' But it is not a question of opinion, as there are facts to go upon. In the work just named is an extract from reports of the Rhode Island Experiment Station,† in which it is stated that where wild turkeys are plentiful crosses between wild and domestic birds frequently occur without design on the part of the owner of the latter. Scores of cases are recorded where a wild gobbler from the woods has taken possession of a flock of common turkeys, sometimes after first battling with and killing the domestic gobbler. The results of such a cross in almost every case have been so satisfactory that such meetings are much desired by turkey-raisers in those districts, and young wild birds are caught for this purpose and brought up with common young turkeys. Very often nests of wild turkey eggs are found in the woods and hatched on the farm. Hence the origin of the Bronze American turkey is explained.

History.—How long since the birds under review became common in America it is impossible to say, but probably 200 years. The first importations into Europe appear to have been in the early part of last century, when Lord Leicester in Norfolk, Lord Powis in Wales, and Lord Derby in Lancashire, had specimens which they bred in a semi-wild state. These birds were only partially tamed, as they were kept with some measure of difficulty, and in a fox country were liable to be destroyed. Although they awakened considerable interest, yet their real value was not discovered until about forty years ago, when the turkey began to displace beef and goose as the Christmas dish in this country, and the fashion for

* 'Turkeys,' edited by Herbert Myrick (New York, 1903), p. 16.
† *Ibid.*, pp. 37-38.

huge specimens came into being. From that time onward they have grown in popularity, displacing nearly all our older breeds. Considerable numbers of stock birds have been, and are still, imported. Upon the Continent so-called Bronze turkeys are found, but unless imported for show purposes, they are duller in plumage and smaller in size than the American, and may be regarded as crosses of Blacks with the older Copper-feathered or Red varieties.

Economic Qualities.—The leading qualities of the American Bronze Turkey are its great size and, under proper conditions, greater vigour than any other member of the same species. With the demand for huge specimens in America for thanksgiving, and in Britain for Christmas, for which high prices are paid, the popularity of this breed is explained. Twenty-five to thirty pound young males of eight and nine months old can be produced, and as these realize a higher rate

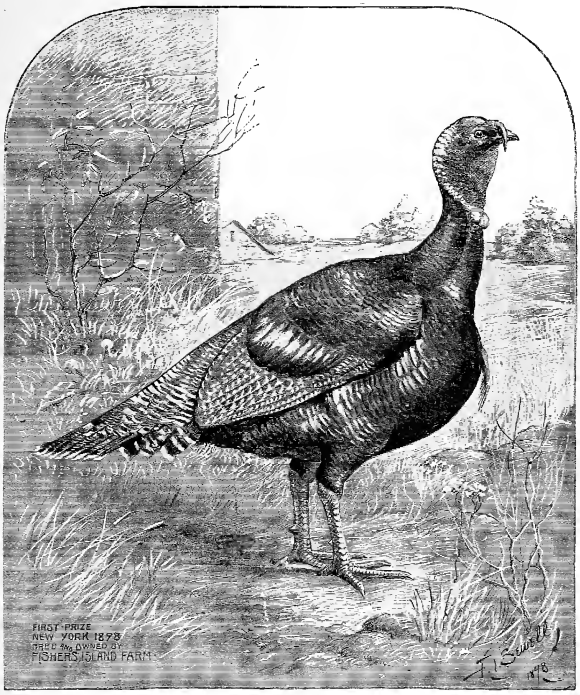


FIG. 88.—BRONZE AMERICAN TURKEY COCK.
Bred at Fisher's Island Farm, N.Y., U.S.A.

per pound than smaller specimens, the breeder naturally seeks to supply that which yields the better returns and a greater profit. They carry a large amount of flesh on the breast; but the best friend of the American Bronze cannot claim that in fineness of texture, delicacy of flavour, and whiteness of skin, it is equal to the Black, or Grey, or Cambridge Bronze, although the meat is not dry, as is that of South European birds. Much depends upon the nature of the soil, general conditions, and feeding; but whilst admitting the great value of this breed, we cannot place it in the first rank for flesh qualities apart from weight. They are heavy in bone, and often show too heavy a bag in front when killed. They are somewhat wild in disposition, and range widely, but thrive well if allowed to roost in trees during the greater part of the year. The hens are good layers, making most faithful sitters and mothers. The chicks are hardy if the parents are well matured before used for breeding and when the broods are reared in a common-sense fashion, but like all other turkeys they may be enfeebled by coddling. As a cross the American Bronze stands pre-eminent where size of progeny is desired. When killed hey are generally very prominent in breast-bone.

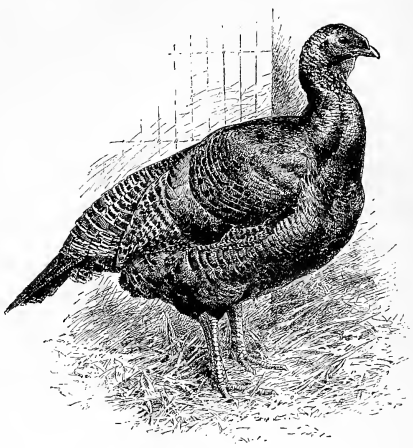


FIG. 89.—BRONZE AMERICAN TURKEY HEN.
Bred at Fisher's Island Farm, N.Y., U.S.A.

very long, and when the bird disports himself is spread into a huge fan; the legs are long, stout in bone, and in young birds almost black, turning to flesh colour with increasing age, which is an indisputable proof in older specimens; in colour the neck and breast are of a rich, brilliant bronze, whilst the back and sides are also bright bronze, with a narrow band of black at the extremity of each feather; the primary feathers of the wings are nearly black, with pencillings of grey or white, but the secondaries are more brown or bronze. When spread the appearance is of equal bars of bronze and grey; the wing-bows are of a lustrous black; the tail feathers are black, across which are narrow bands of light brown, with a broad band of black, and a wide, grey margin at the tips. The hens are similar in body to the males, but not so brilliant as in the latter, and, of course, have not the spreading tail. Weight: males, 22 to 34 pounds; females, 14 to 18 pounds; but the bigger specimens are generally unreliable for breeding purposes, and two-year-old birds are better if 26 pounds for males and 16 pounds for females. It is interesting to note that wild turkeys have been shot in America weighing 60 pounds.

Description (Figs. 88 and 89).—The body long, well rounded, and about midway very deep, rising sharply to both front and back; the back and body are very broad, and the breast is prominent and wide; the neck is long, well curved, and heavily clad with feathers; the head is long and broad, with a strong, curved beak of horn colour; the caruncles as already described in the Black, and in the males these are very full indeed; the eyes are dark hazel; the wattles large and pendulous; the wings are large, powerful, wide-spreading, with massive muscles, enabling the bird to rise; the tail in the male is

NARRAGANSETT.

NOMENCLATURE: Narragansett.
VARIETY: One.
CLASSIFICATION: Table.
COLOUR OF FLESH AND SKIN: White.
COLOUR OF LEGS AND FEET: Deep salmon, or brown.
COLOUR OF EGG-SHELLS: Cream, speckled with white.

Origin.—This race appears to have been bred in the New England States, more especially Rhode Island, for a long period of time, taking its name from the bay which stretches from Newport to Provi-

dence, Rhode Island. It is more than probable that they have descended from a race of Black turkeys, kept prior to the introduction of the wild blood, perhaps brought from Mexico.

History.—At one period they appear to have been ubiquitous in the district giving them the name. As Mr. H. S. Babcock says:* 'It is the variety which, in all probability, first gave to Rhode Island turkeys their world-wide reputation. That reputation has remained, though the variety has to a considerable extent disappeared from the borders of the bay. The greater size of the Bronze turkey has been a potent cause in the gradual disappearance of other varieties.' So far as known, they are not widely distributed, and we have never seen any specimens in Europe.

Economic Qualities.—The Narragansett turkey does not attain the same weight as the American Bronze, but is said to be much finer in quality of flesh, which is softer, and they are not so heavy in bone, maturing more rapidly, and meeting a demand for medium-sized, fleshy birds. They are probably not so hardy as the Bronze. The hens are very good layers, but do not make good sitters, as they are late in becoming broody. They do not wander far from home.

Description.—This race is shortish in the leg, and of a compact, cobby shape, without the massiveness of the Bronze. The plumage is of a metallic black, each feather ending in a broad, light steel-grey band, edged with black; the flight feathers are black, barred with white or grey, showing two narrow bars when folded; the tail of the male is black, barred with brown, and terminating in a broad black band, with a light grey margin: in the hens the plumage is much paler and duller; the beak is light horn in colour. Weight: males, 20 to 25 pounds; females, 14 to 18 pounds.

FAWN.

NOMENCLATURE: *English*, Buff or Fawn; *French*, Chocolat; *Italian*, Fulva.
VARIETY: One.
CLASSIFICATION: Table.
COLOUR OF FLESH AND SKIN: White.
COLOUR OF LEGS AND FEET: Bluish-white, or flesh-colour.
COLOUR OF EGG-SHELLS: Cream, speckled with brown.

Origin.—Specimens of Buff, or Fawn, or Chocolate turkeys, for they vary greatly in colour, are to be met with in several European countries, and they are to be found in America. That they are merely sports from the Bronze, due to crossing with the White, is evident. Upon this point Mr. H. S. Babcock writes:† 'How it perhaps originated can be guessed, though we have no records to tell us the matings or the maker of the matings. But as black-red domestic fowls crossed upon white produce an approximation to buff, which, by selection, can be perfected, we believe that a cross of the Bronze and the White turkey, with subsequent selection, would produce the Buff variety.'

In older books references are made to this colour, but they are always recorded as scarce, and few are found in exhibitions either at home or abroad.

History.—The writer just quoted states* that 'a variety of the Buff turkey used to be bred in Pennsylvania, U.S.A., under the name of Tuscawara Reds. These birds had a deeper plumage than the ordinary Buff.'

In the last edition of Moubray† it is said that these Buff turkeys, 'with plumage of a light buff or delicate fawn colour, have an exceedingly neat and Quaker-like appearance when the shade is unbroken, but it is sometimes broken with white. This colour is but rarely met with now.' When, as already noted, Copper or Red turkeys were by no means infrequent, Buffs would naturally be produced, but for some reason they have not attained any measure of popularity, and are kept for their rarity rather than for practical purposes.

Economic Qualities.—Upon this point very little information is available, due to the fact that this race has been kept chiefly for its ornamental characters, and has not been brought into comparison with others. In size they are about the same as the Whites, and equal that variety in meat qualities. They are stated to be fairly hardy, but upon that point we should desire further information. Birds which are primarily bred for exhibition, more especially when the plumage is so difficult to obtain true as in the case of all buffs, are often in bred, and thus the natural vigour is less than where the economic qualities are the primary consideration.

Description.—The shape of body closely follows the breeds already described, and need not be stated in detail, the differences being entirely of colour; the plumage is of a pure buff, or of light fawn, or of deeper red, almost chocolate, in accordance with the depth of pigment, and when even any one of these shades is pleasing in appearance, but it is very seldom that specimens can be found which do not show variations in depth of colour, or are free from what is called patchiness—that is, lighter patches over the body—and as a rule the under-colour is lighter, as are the wings. The best we have seen in these respects were those of a darker hue, called chocolate in France, but even with these the colour was not pure, as there was a good

* 'Turkeys,' edited by Herbert Myrick (New York, 1903), p. 31.
† *Ibid.*, pp. 29-30.

* 'Turkeys,' edited by Herbert Myrick (New York, 1903), p. 30.
† 'Practical Treatise,' by Bonington Moubray (London, 1854), p. 227.

amount of black on various parts of the body. The beak is bluish-white; legs and feet bluish-white, or flesh colour; in many cases the tail feathers are very dark. Weight: males, 18 to 20 pounds; females, 12 to 16 pounds.

RONQUIÈRES.

NOMENCLATURE: *Belgian*, Dindon de Ronquières.
VARIETIES: Several.
CLASSIFICATION: Table.
COLOUR OF FLESH AND SKIN: White.
COLOUR OF LEGS AND FEET: White.
COLOUR OF EGG-SHELLS: Cream, spotted with brown.

Origin.—It would be difficult to fix the origin o this race of turkey, which is bred extensively in Belgium, and which is evidently due to a mixture of breeds, mated without any reference to the coloration of plumage, as the economic qualities are the primary consideration. From the appearance we should judge that the basis is the French Black turkey, known for its excellent qualities, and bred for a long time upon definite lines in France and the adjacent countries. With this there would appear to have been crossed the Grey and the White races of this species, both of which, with the Blacks, can be traced in the Ronquières. It is possible, also, that there may have been an infusion of Bronze blood. All is, however, uncertain, as there is no direct evidence to show the method of mating to produce the birds as we see them at present. Size of body, wealth of flesh, white legs and feet, have been the leading points aimed for by breeders, who had not the object of producing a pure race, but of securing fine market turkeys, capable of attaining heavy weight in a short space of time, and yielding the largest amount of profit. Such uniformity of character as has been obtained is due rather to natural evolution than to skilful breeding. 'Handsome is as handsome does' has evidently been the idea prevailing in the minds of those concerned in the development of this race.

History.—It is only within the last five or six years that the Ronquières turkey has received recognition as a pure breed, and upon the usual lines it can hardly be said to deserve that name, as the variations are very considerable in the same brood. As stated in the report of a Belgian stock:* 'The breeding-pen is composed of a turkey cock and five or six hens. The male is very large, and of a dark colour; the plumage of the hens has no uniformity—each has a different plumage.' Since that date, however, breeding upon more definite lines has taken place, as is essential if the economic qualities are to be fixed and transmitted, though we agree that selection of the male is more necessary than of the female, so far as coloration of feathers is concerned.

Economic Qualities.—The Ronquières turkey is most noteworthy for its table qualities, as it is a quick grower, carrying a large amount of breast meat, which is fine in flavour, soft, and beautifully white in colour. In size they do not attain the proportions of the American Bronze, but are larger than the ordinary European White turkey, and as they fatten well they can be fed up to 20 pounds or even more. The hens are good sitters and mothers, and are regarded as hardy for this species, more especially as they are bred and reared under somewhat rough-and-ready conditions.

Description.—We quote from an article on this breed by M. Louis Vander Snickt, of Brussels:†

'The typical colour (of the male) from which are derived all the secondary colours, is a dark grey and dull tawny; each feather, of which the centre is pencilled with fine black concentric lines, is bordered with a black bar showing brilliant metallic reflections. The edges of the feathers of the stern, the abdomen, and the tail are white. The hens are of all colours imaginable, even yellow, yellow with each feather edged with black, grey, whites with each feather bordered with black, pure white, and combinations the most diverse. But whatever the plumage may be, the feet are always white, with white toenails, signs required in all fowls destined to produce fine white flesh.'

Some specimens we have met with were as follows: The males were very dark, well marked with yellow, the black, which was very bright, predominating greatly; the hens were of a grey ground colour, with one dark bar on each feather. The breed is capable of improvement, and appears to be worthy the attention of practical turkey-breeders.

* *Chasse et Pêche*, April 22, 1900, p. 478.
† *Ibid.*, p. 479.

CHAPTER XVI

EXTERNAL CHARACTERS OF POULTRY AND THEIR VALUES

Effects of exhibition system—Standards—External characters and Internal qualities—Plumage—Coloration of plumage—Comb and wattles—Beak or bill—Earlobe—Wings—Legs and Feet—Size—Type—Voice

EFFECTS OF EXHIBITION SYSTEM.

THE question has frequently been raised in connection with all forms of stock-breeding as to the correlation of external characters with economic qualities. There are those who condemn the exhibition system entirely, who say that it has been a gigantic mistake, that instead of working for the improvement of our stock it has led to degeneracy, and that we ought to abandon it altogether in order to develop the economic properties. On the other hand, there are those who claim, and with a certain amount of reason, that the progress made in any branch of stock is greatest where exhibitions have been held, and, further, that the general quality of the animals and birds met with in such districts is distinctly higher under these circumstances than in the absence of shows. The latter fact is unquestionable. We have had the opportunity of visiting almost every part of the United Kingdom and of observing the stock in detail, as well as of noting the conditions in other countries; and however much truth there may be in the statement first made above, it is impossible to deny the truth that shows have a marked influence upon the class of animals kept in any district. Whether this influence is as great as it might have been under other conditions is a different question altogether, as also is how far such exhibitions have served their purpose. Probably the practical value of shows in this country has been attained—namely, the improvement of existent breeds and the introduction of new races, and that, except from the promotion of recreative or pleasurable breeding, in itself an important consideration to large masses of the population, further developments can be secured by other means. Whilst acknowledging, therefore, the value of what is called 'fancy' poultry-breeding, we believe that the truth will be found between the above extremes.

STANDARDS.

When endeavouring to discover the wisdom or unwisdom of adopting fixed standards for the different races of poultry, it is essential to recognise the fact that external characters must have some cause or meaning. It has already been seen that artificial selection—that is, breeding for definite points—is almost entirely based upon natural variations. Certain types are produced by special conditions, and a measure of uniformity is thus obtained without artificial selection. As shown below, that is evident in connection with coloration of plumage, of legs, and of flesh. These cannot be maintained under a different environment. They are the expression of the special conditions by which they were produced. It is the adoption and extension of merely arbitrary points, which have no economic value, so far as can be discerned, which, especially if carried to an extreme, may reduce or destroy the profitable qualities of the fowl. For such excess there can be no dispute that exhibitions are entirely responsible, and it must be admitted that grave and serious mistakes have been made as a result of the show system. Breeds have been ruined practically by undue development of characters which were perhaps beneficial up to a given point. In all nature we find reactive influences with a view to the maintenance of a proper balance, and excess in one direction compensated by loss in others. Instances in proof are given below. Every part of the structure has some purpose, so long as it is maintained in due proportion to the other parts.

We are thus led to point out the desirability of keeping in view the fact that external characters should be in distinct sympathy with internal qualities. In many breeds of poultry which are popular in the exhibition-pen this is altogether forgotten. Breeders of purely fancy poultry seldom care anything about

utility. One can understand this. For instance, a breeder of, say, Langshans who only looks to the exhibition-pen would much rather that one of his hens should lay fifty eggs in the year, and the chickens hatched from those eggs be to a large extent perfect in external qualities, than that hen should lay 150 eggs in twelve months and the birds be inferior. The better birds he may sell at prices from 10s. to £10 each, whereas the eggs as eggs are only worth from 1d. to 2d. each. Thus the whole tendency of the fancier, who has not wisdom to see the effects of his work, is towards exaggeration. In this connection there are very strong influences which compel him sooner or later to remember that the sacrifice of economics for purely fancy characteristics does not pay in the long-run. The bulk of the breeding of poultry is for practical purposes, and as soon as the exaggeration of externals means that breeding becomes so difficult as to be confined in the hands of a few individuals, and also entails the sacrifice of those properties which recommend the breed to the ordinary poultry-keeper, then the demand at once falls off. It is for this reason that many breeds which at one time were popular are no longer so. At the same time, however, too much stress must not be laid upon this point. Many of those who study poultry forget that with a rapidly reproducing race the tendency to exhaustion must always be very considerable, and that unless the greatest care is exercised in the direction of out-crossing the breed is bound to lose ground. Thus the fact that many breeds are no longer popular, which at one time were amongst the most valuable for economic purposes, must not be wholly laid down to fanciers. It is to some extent a natural influence.

So far as can be seen, there is no reason whatever why there should be any antagonism between the external characters and internal qualities. To some extent the former are artificial, and where the artificiality is carried to too great a length, then there must be loss in other directions. The object of those who draft the standards for our different races of poultry should be (as far as possible) to give prominence to those points which are in unison with the economic properties for which the breed in the first place won favour. It must not be forgotten that this latter point is of supreme importance. There are many breeds of poultry now popular which at first secured attention by reason of the fact that they were exceptionally good layers, good upon the table, or good for some other purpose. All our standards should be drawn upon this basis. As an instance, in the case of Leghorns the reason why they first became popular was because of their exceptionally good laying qualities. In forming a standard for the Leghorn, supposing that in an arbitrary manner those framing it had declared that the comb of the Leghorn should be small, like, say, the Game. That could have been effected; it would only have taken a few years, and breeders could have reduced the comb in the way we have indicated. Such, however, would have destroyed absolutely the great quality of the fowl, and therefore in drawing up the standard it was most important that the size of comb should be distinctly large. Another instance will suffice. In the case of table fowls, a large comb is not desirable, because these birds are, on the whole, only moderate layers, but what is wanted is a comb fine in texture. If in forming a standard for the Dorking preference were to be given to the big, coarse-combed birds, doubtless that would improve them in vigour, and probably in productiveness, yet at the same time the quality of the flesh would be distinctly impaired. These questions are dealt with in detail in the following paragraphs, the object of which is to attempt what has never yet been done—namely, discernment of the correlation of external characters to internal qualities. In doing so it is necessary to frankly indicate the errors made under the present system, with a view to their avoidance in the future.

It is needless to discuss again the question as to the relative value to practical poultry-keepers of pure breeds as against mongrels. The former must be used as the basis of all progressive aviculture. The subject is dealt with in another place,* and the great importance of pure races is fully recognised.

PLUMAGE.

The outer covering of birds consists of feathers, which serve two purposes—namely, as a covering to the skin, affording protection and warmth to the body, and as organs of flight. The last-named point need not concern us, as we seek as far as possible in domestic poultry to limit and suspend all desire for use of the feathers in that direction. With regard to the former, it should be remembered that the skin of birds is much thinner than that of hair-clad animals, giving less protection to the body, and is devoid of the usual glands. Change of conditions has a marked influence upon the plumage, in colder latitudes becoming thicker and more abundant than in warm climates, due to the fact that the well-clad fowls are able to withstand low temperature to a greater extent than lighter-covered birds. Here, again, is an exemplification of the law of 'survival of the fittest,' and an explanation why certain races of poultry thrive in cold, exposed districts to which others are unsuitable. Activity of habit and vigour of constitution mean much in this direction, but it is found that the heavier-feathered races of fowls are better winter layers than those which are lighter in that respect. Practically the feathers are of small economic value, save in so far as they are essential to

* 'Poultry-keeping as an Industry for Farmers and Cottagers,' by Edward Brown, F.L.S. (London, 1904), p. 22.

enable the birds to attain the object for which they are kept. That they are a most expensive part of the system to produce appears to be unquestionable, as with more abundant plumage growth is slower and food consumed correspondingly increased. Usually on the more active races hard, tight feathering is found. With a sympathetic temperament is associated soft and more abundant plumage.

COLORATION OF PLUMAGE.

On approaching the question of coloration of plumage, very little is known as to the causes of variation. That such causes exist cannot be questioned. We have already seen that under changes of condition the tendency to variation is greatly increased. Soil has a very rapid effect upon colour of legs and of flesh, and as feathers are fed by the body, it may be assumed that they are affected in the same way. Mr. Primrose McConnell mentions* that the colour of the Cleveland bay horse may be due to its having been bred for centuries on an ironstone soil, and that the wool colour of sheep is influenced by the land upon which they are bred. Very little is, however, known upon this question. It is probable that the effect of soil upon the colour of plumage is indirect rather than direct.

The primary colours of the domestic fowl are four—red, black, yellow, and blue. White is not a colour, but in fowls may be due either to an absence of pigment—that is, albinoism—or to a combination of other colours—that is, a strong white on a dark ground. All the colours seen on domestic poultry are composed of the above, but subject to many variations of shade in each. Among self-colours—that is, those which are of the same colour throughout—blacks and whites are the most numerous; yellow (or buff) and blues very difficult to obtain and maintain—in fact, a perfect buff or blue is never seen, as white is always present in the former and black in the latter; and of reds there are two races—namely, the Red Orloff and the Rhode Island Red—but in both black is present to a considerable extent. The majority of our poultry have a mixture of colours in their plumage.

It would appear, as already seen, that there is always a tendency to variation under natural conditions, which is increased when the birds are domesticated, and that the fixing of certain colours and types is due to the fact that those birds which conform largely to the surrounding conditions are less easily seen by their enemies, and therefore are preserved whilst others are destroyed. That soil and food also have influences is apparent. Light and darkness, heat and cold, all share in this direction. Animals and plants bred and produced in darkness are deficient in coloration, whilst all the richer-hued species under natural conditions live in the torrid zones. In the Arctic regions there is an almost entire absence of colour in animal life, partially due, no doubt, to the protective influence mentioned above, but also to the lack of heat in the atmosphere. Coloration may be regarded, therefore, as a result of environment and of food, at which point the question must be left, as our knowledge is so scanty and incomplete. It is a natural result of the conditions under which the bird lives, and there is ever a tendency to conform to those conditions. When domesticated the endeavour is to escape from such limitations, to perpetuate variations which would seldom be produced under other circumstances. It is thus there arise many of our difficulties.

Whilst it appears to be essential, in order to maintain purity of race, that coloration of plumage must be given its place in the whole, the mistake is in making it, or, in fact, any point, supreme to all other considerations. Under the exhibition system there are great temptations in this direction. For instance, a sound-coloured Buff Orpington may be worth as many pounds as another, less perfect in that respect but superior in practical qualities, is worth pence. The fancier, desiring the pounds, sacrifices every other quality. Not only so, but he deliberately and designedly eliminates the more vigorous specimens, as shown in sports and what are called mismarked feathers, retaining the more refined but weaker birds as breeding stock, thus enhancing the tendency to loss of virility which is ever present under such conditions. We have previously discussed this important question,* but may add that variations are frequently the expression of dormant characters or qualities which would stem the downward influence, and preserve the race from enfeeblement. The fancier, however, sternly represses this influence by elimination of such specimens from his stock. As Darwin says:† 'Man always tends to go to an extreme point in the selection, whether methodical or unconscious, of all useful and pleasing qualities.' Our point is that whilst we must regard colour of plumage as part of the whole, it is only part, and selection should not be too rigid. Buff tails in Buff breeds may be pleasing in appearance, but are unnatural, and the birds with black tails are to be preferred.

COMB AND WATTLES.

The head of all races of domestic fowls is ornamented with fleshy enlargements, varying greatly in size and shape. These consist of what is called the comb—that is, a fleshy growth above the crown

* 'Agricultural Zoology,' by Primrose McConnell (London, 1902), pp. 281, 312.

* 'Poultry-Keeping as an Industry for Farmers and Cottagers,' by Edward Brown, F.L.S. (London, 1904), pp. 33-34.

† 'Variation of Animals and Plants under Domestication' (London, 1885), vol. ii., p. 235.

of the skull—and of the wattles, usually double, which hang below the jaw or lower mandible. They are very different in size and shape (see Chapter II., Fig. 3), and are in all cases larger in the male than the female. It is difficult to determine the reason for these characters, which are probably due to sexual selection, the males most prominent in these respects attracting the females more than others. Descriptions of the forms of combs and wattles are given in Chapter II., p. 21. The shape of comb appears to have no meaning. Economically the combs and wattles of fowls are of small value. In France and Belgium the former are cooked for human food, making a palatable dish when skilfully prepared, but in this country they are seldom so used.

That there is a correlation between the combs and wattles and the reproductive organs of fowls cannot be questioned. Evidence of that fact is within the reach of every breeder of poultry. In the males the comb is largest and brightest during the breeding season, and when a hen is about to begin laying and whilst she continues in profit it is large, firm, and bright. So soon as she ceases production it shrinks and becomes comparatively dull. So far is this recognised that it is a common saying that a hen 'looks like laying.' Further, during the growing stage the comb indicates the time of puberty. Races in which the comb shoots early are those which come into profit soonest. From these evidences it is apparent that there is a direct connection between the head ornaments and the egg or generative organs, for which reason they assume a more important position in our consideration of the relationship between characters and qualities, and are an indication of practical value to the breeder.

A careful inquiry into the size of the comb reveals the fact that all the most prolific races have large combs, and that with increased egg production there is a corresponding enlargement of the comb. In saying this, we do not ignore the fact that one or two large-combed breeds are moderate layers, even where they have not been artificially selected for that point. The most striking example is the Dorking; but the size of comb must be compared with the size of body. What would be a large comb on a Leghorn would be medium on a Dorking. By such a standard the Dorking comb may not be regarded as large, and must be classed as medium. We cannot, therefore, escape from the conclusion that size of comb is influenced by productiveness, for the shape does not concern us; it is the amount of flesh in the comb and wattles, as compared with the bulk of body. *Pro rata*, a Hamburgh has as large a comb as a Minorca, or nearly so. The tendency to rose or flat combs in very cold countries is marked, as they are less liable to frost-bite than single combs, and under such conditions small-combed races will prevail, unless artificial selection comes into play.

There can be no question that size in comb has been carried to an extreme by fanciers, who have produced the exaggerated combs seen on several breeds. Exhibition Minorcas, Leghorns, Andalusians, Wyandottes, and others, have had their combs greatly enlarged of late years, to the injury of the respective races, both as to productiveness and beauty. We have always protested against these monstrous combs, both from the æsthetic and practical points of view, and it cannot be questioned that they have been injurious, reducing the vitality and prolificacy of the birds. Definite evidence can be given as to the injury done by these large combs. Mr T. Henry Thornton writes * of 'birds with combs that hang down four or five inches below the level of the wattles, completely rendering useless the eye on that side, and burdening the poor victim of "craze" with an appendage which is neither useful nor ornamental.'

A most striking instance of how exhibitors recognise the evils of excessive combs upon breeding stock, although they produce them for the sake of prize-winning, was reported by Mr. A. F. Hunter, of South Natick, Massachusetts, U.S.A., in respect to his visit to Messrs. Abbot Bros., the well-known Thuxton poultry-breeders:† 'Among the stock birds I noticed many c cks that were dubbed, and Mr. Abbot told me it was their practice to dub their single-combed stock birds; of course, that spoils them for showing, but they are always better for stock purposes; in fact, Minorcas, Leghorns, and Silver-grey Dorkings are now bred with such excessive combs that it is necessary to dub many of them to relieve the pressure upon the brain and restore the bird to good condition. Mr. Abbot told me that they had male birds killed by that excess of comb, and said: "I can show you in the pens over yonder a bird that will die within a week if he isn't dubbed." Arrived at the pen, he showed me a Silver-grey Dorking cock, a splendid bird, that "had been shown several times and always brought back a prize-card," and now was dumpish, listless, carrying his head drooping and with a decided "list to starboard." The comb was a very large one, and evidently was bearing down heavily upon one side of the skull, the carrying of the head a little sideways being apparently due to an effort to relieve the pressure upon the brain. Mr. Abbot said: "I'll dub that bird to-night, and in twenty-four hours he'll be all right again; all he needs is relief from that pressure of comb on the skull."' Mr. Lewis Wright sums up the matter concisely‡ as follows: 'The hen or pullet is practically blinded on one side, and in both sexes the weight is too great for the brain, causing brain fatigue and often headache, which exhausts the nervous energy and so impairs the sexual vigour.'

* *Feathered World*, March 31, 1899, p. 619.

† *Farm Poultry* (Boston, U.S.A.), October 15, 1897, pp. 355-356.

‡ 'New Book of Poultry,' by Lewis Wright (London, 1902), p. 179.

In all Nature a reactive influence is exerted with the object of preserving a balance and of meeting any excess. Large combs are desirable in connection with egg production, but when increased beyond a reasonable point a reverse influence is apparent. What the point is may be stated to be that on single-combed fowls the height from the base to the extremity of the longest spike should not exceed twice the length from the centre of the eye to the tip of the beak. Thus, if the latter were 2 inches, the comb should be 4 inches or a little less. In rose-combed fowls it is more difficult to measure, but the height of comb should not be greater than the width, and the latter be the same breadth as the skull. Such birds would yield all the advantages of large combs in relation to the size of body, without any of the evil effects of excess, and be well proportioned.

The comb also indicates table qualities, but by fineness of texture, not size. A coarse comb is the expression of coarse flesh, and in selection of breeding stock for market chickens it is important that birds with a neat, finely-made comb be chosen. The comb is also the barometer of general health, but upon that we need not dwell.

BEAK OR BILL.

The beak in fowls and turkeys and the bill in ducks and geese have distinct correlation with the qualities. Nearly all the yellow-fleshed and egg-producing races of fowls have a yellow or horn-coloured beak, sometimes darker on the upper side, whereas the white-fleshed races have either a white or a dark beak. Consequently, the breeder will find it advantageous to keep this apparently minor point in view, for it is not merely an arbitrary standard. In America, however, where yellow flesh is preferred upon the table, to produce this the beak should be yellow; but European taste is in favour of white flesh, and under those conditions it would be folly to breed from birds with other than white or dark beaks. Further information is given below in respect to coloration of legs and feet.

In ducks and geese it is found that white flesh is associated with flesh or dark coloured bills. In the case of the Aylesbury the ideal of the bill is that of a lady's finger nail, and in Belgium blue bills with a white bean or tip are thought to accompany the best flesh. Yellow bills, as in the Pekin, mean yellow flesh. The same is true in geese, where a white or light horn bean is of great importance.

EARLOBE.

So far as we know, the earlobe is no indication of any quality, and therefore has no practical value. In ordinary fowls it is usually red, as might be expected where the face is of that colour, but frequently white streaks are found upon it; but instances are to be met with where it is creamy-yellow in tint, following the colour of the skin and legs, and in others bluish-white. To breed for white earlobes on birds with yellow skin is fighting against Nature. Yet this is a point insisted upon in several races. Breeders know that birds showing red in the earlobes where white is the standard are often hardier and stronger than those more perfect in that respect. Show birds are often kept in strict confinement to bleach the earlobe, which treatment tends to enfeeblement. We believe that white earlobes are often natural to white-fleshed breeds but colour is a very minor and arbitrary point, and increase of size of lobe is injurious and certainly not ornamental.

CREST AND BEARD.

Ornamental tufts of feathers are found on the heads of many species of birds, and among domestic poultry here is a strong tendency in the same direction. On reference to the description of Russian fowls in Chapter XI. it will be seen that several races which have not been carefully selected have crests or beards. We have met with poultry of all kinds—fowls, ducks, geese, and turkeys—in almost every country we have visited displaying these features. Artificial selection of these variations has led to the development of crests and beards in such races as Polish, Dutch Crested, Houdans, etc. Natural variation, however, is very apparent in common poultry. So far as can be learnt these are purely ornamental and have no practical value, although it is stated that the crest in certain breeds has the same influence as a comb. In fact, in a moist climate a crest is a serious disadvantage to any fowl. A very interesting development of the cranium is found in all fowls with large crests. As a rule a large-crested fowl has a small comb, which the late Charles Darwin says* 'seems always accompanied by a great diminution or almost entire absence of the comb. A large beard is similarly accompanied by diminished or absent wattles. These latter cases apparently come under the law of compensation or balancement of growth. A large beard beneath the lower jaw and a large topnot on the skull often go together.' There are exceptions to this rule, for the Houdan has both crest and comb of considerable size, and there are several breeds, notably the Faverolles, which are bearded but have no crest, and the Crested Dutch, which have crest but no beard. How far the crest is correlated to the comb we have no evidence. The suggestion is made that crests, beards, and muffs are a protection against frost-bite, and therefore they are preferred in cold countries.

WINGS.

Flying birds display greater development of the wings than of the legs; those who move by walking are stronger in the legs than the wings. In both of

* 'Variation of Animals and Plants under Domestication,' by Charles Darwin, F.R.S. (London, 1885), vol. i., p. 288.

these cases the respective muscles would be specially developed, and the opposite muscles weakened and decreased in size. In Chapter II. this point is mentioned when dealing with the classification of table poultry. As the motor muscles of the wings consist of the flesh found upon the sternum or breast, the correlation of the wing and table properties of the fowl is at once evident. Large wings mean well-developed breasts, therefore good table fowls; small wings lack of flesh on that part of the body, and poor table properties.

LEGS AND FEET.

We have previously* explained the influence of soil upon the colour of the legs and feet of poultry, and also upon the growth of young birds. Such colour is a very important indication of the flesh qualities. Without exception, white flesh and skin are correlative with white legs, white or grey flesh with blue or black legs, and yellow flesh with yellow legs. White-fleshed birds stand first in value upon European markets for table purposes, and grey second; whilst yellow-fleshed races are the most prolific layers and hardiest, grey-fleshed second, and white-fleshed third, in the absence of special selection. In some countries blue-legged fowls are regarded as the finest in flavour of flesh.

Study of the various races reveals the fact that there is considerable variation in the length of leg in fowls, with much greater uniformity in ducks, geese, and turkeys. The latter have not, however, been bred so much for exhibition purposes. The Game and the Malay, with their great length of lower limbs, are at one extreme, and the Dumpies and Courtes-Pattes, with their abbreviated legs, at the opposite. Both have been bred for the result attained—the former as exhibition fowls, the latter to prevent their scratching in gardens, etc. But the majority of our fowls have legs of medium length, in conformity with size and weight of body. A Plymouth Rock has a much longer leg than a Leghorn, but it is correspondingly larger and heavier in body, and needs it. That excessive length is a mistake cannot be doubted, as with it there must be increased thickness of bone, which is the most costly part of the body in time and food to produce. We must, therefore, consider the thickness of leg-bone in relation to the entire skeleton and the object for which the fowls are raised. Lightness of bone means quicker growth and earlier maturity, whether for flesh or egg production; heavy bone means retardation of development, but ultimate enhancement of size. There should be a sufficiently large frame, but an ounce more than is required involves a corresponding loss of profit. Up to the present scientific research has helped us very little, and knowledge upon the subject is due to practical observation.

* 'Poultry-Keeping as an Industry for Farmers and Cottagers,' by Edward Brown, F.L.S. (London, 1904), pp. 38-39.

At the Congress held at St. Petersburg in 1899 a most interesting paper was read by M. Abozine on the 'Relation of the Body of Fowls to their Fecundity,' in which he states that the opinion that races of poultry destined for the table possess, relatively speaking, lighter bone is very general. On examination of the skeleton of a large number of fowls he always found that the relative weight of the dried skeletons to that of the entire living bird and of its edible parts is the same for all breeds, and equivalent to 6 per cent. For a skeleton not dried the proportion is 8 per cent. The old theory, says M. Abozine, 'the more the bone, the more the flesh,' is perfectly correct. Different birds of the same breed may have bone of variable thickness, but it is always in direct proportion to the quantity of flesh, of skin, and of feathers. That is why the weight of the skeleton to the living bird is in all cases invariable.* The question here raised is very interesting and important, calling for further inquiry. But fowls carrying a large amount of flesh upon the thighs are heavier in leg-bone than those which are more fully developed in breast. The one is a result of the other. Hence the birds with large wings and breast muscle are quicker in growth than those with heavy legs.

M. Abozine states that† 'the weight of leg-bone in Game fowls, in respect to weight of the entire skeleton, is about 40 per cent.,‡ and the same proportion exists in the Cochin; in Malays this ratio is 42 per cent.; in Polish 30 per cent.; in Dorking cocks 34 per cent.; in Dorking hens 30 per cent.; and in Hamburghs and Bantams 26 per cent.'

Our knowledge upon this question is too limited to make definite deductions, but enough is known by practical observations to say that whilst the thickness of leg-bone must be proportionate to the size of body, for table poultry fineness of bone is essential to insure rapid growth, and as an indication that the meat shall be more upon the breast than the thighs.

The usual number of toes is four, but in some breeds five are present, chiefly in Dorkings and races descending therefrom. This supernumerary digit is of no value, except as a sign of descent. The toenails are usually of the same colour as the beak, and can be regarded in the same way. Feathers on the legs and heavy hocks are useless additions, associated with heavy bone, costly to produce, and should be regarded as objectionable by the practical poultry-breeder.

SIZE.

Reference has been made to the fact that one of the results of domestication is a considerable increase in the size of our poultry in all species except one—the turkey. As the reduced body of the latter would

* *Travaux du Congrès International d'Aviculture*, May, 1899 (St. Petersburg, 1901), p. 1.

† *Ibid.*, p. 2.

‡ By which is evidently meant the heavy Game of Continental countries, not the lighter English.—E. B.

appear to be due to direct action on the part of breeders who have found smaller specimens more profitable than the wild birds, and have consequently made selection accordingly, that does not affect the general rule. In bantams also diminution is due to artificial selection. Where the effects of abundantly-provided food and limitation of exercise, with absence of danger from enemies, are given full scope, increase is speedily apparent in all races of fowls, ducks, and geese, varying considerably, it is true, but always apparent. That is to the good, if not carried to an extreme, where the object is flesh production. But the heaviest birds, when in lean or hard condition, are not the most profitable, as they add less *pro rata* to the weight by fattening than do the medium-sized races. But a bulky frame is desirable. Our opinion is that among young chickens and ducklings from 3 to 5 pounds, in accordance with the breed, and in older birds from 5 to 7 pounds, are the most profitable, and give the best quality of flesh. Upon that question we do not express a definite opinion, as reliable data is unavailable.

In respect to the production of eggs, there is no doubt whatever that the smaller-bodied birds of any race are more prolific than bigger specimens of the same breed. Among cows the best milkers are always small and lean. Increase of bulk means lessened yield of milk. So it is with hens. All the best laying breeds are small in size of body. Physical activity is essential to good laying. The larger-bodied fowls are less active. For the ovaries to operate quickly the blood must flow freely, which is never the case unless the temperament is lively. Fully-matured hens, weighing from 4½ pounds to 6 pounds, will be more prolific than if larger, as with increased size there is more demand upon the food for support of the body, and a greater tendency to flesh production. Small medium fowls are to be preferred as layers and large medium for table purposes, with large where the market demands greater size—that is, eight and nine months old birds, commonly called capons. We cannot expect to obtain the full measure of quality in more than one direction.

Some years ago we met with an interesting instance which is worthy of record. A breeder of Silver-grey Dorkings determined to increase by selection the production of eggs in his stock. He did so to a remarkable extent without any crossing, but each year there was an equal loss in size of body and flesh properties. We do not see why in nearly every breed there should not be two distinct classes, one bred for table qualities and the other for eggs, the former a larger race than the latter by 2 or 3 pounds. And if the fanciers desired their part in the business they could have a third size, the Bantams. For practical purposes in all the economic races the result would be satisfactory. Taking Dorkings, for instance, first, we should have a small type, not exceeding, when matured, 6 pounds in cocks and 4½ to 5 pounds in hens, which would provide splendid asparagus or milk chickens and the hens be excellent layers; and, second, as now in respect to size, meeting the demand for table poultry of a greater bulk. So throughout the entire range of our domestic poultry.

TYPE.

Every breed should have its distinct type or character, and in breeding this must be kept to the fore. To describe type is difficult, but it may be explained as the combination of characters which give the race its individuality and distinguish it from others. Into type the shape, conformation, size, and carriage, enter more fully than coloration of plumage.

VOICE.

Although the voice of the fowl, especially the crow uttered by the male, cannot be strictly regarded as an external character, yet it must be mentioned by reason of its revelation of economic qualities. In Belgium cock-crowing matches are held for the purpose of testing which birds crow earliest and longest, and with a practical rather than a sportive object. That there is a correlation between the comb and the reproductive organs is undoubted, and the period at which a cockerel begins to crow is determined by the springing of the comb—that is, the time of puberty. M. Vander Snickt called attention to this question at the Reading Conference in 1889, at which he said * that there 'is a vast difference between a cockerel at five or six weeks old, if it belongs to a medium, early matured, laying breed, or to a large Asiatic breed. . . . When the chicken first comes from the egg-shell the comb of the cockerel is always flat against the head; when the chicken is dry the comb rises from the head. Then cockerels begin to crow early, say at three weeks old. . . . The cock who is the most often disposed to crow is also he who may be able to conduct the largest flock of hens. . . . The more often adult cocks crow after having been trained, the earlier their offspring cockerels crow and the earlier the pullets will lay. . . . A cockerel will not crow before his comb is developed and red; the comb will not be red before the interior organs are developed. There is an advantage in developing maturity as soon as possible, for the sooner the cockerels are in a mature state, the sooner they bear a lot of ripe meat, the sooner they can be killed, fattened, or caponized.' Our knowledge upon this subject may be summarized by saying that early crowing means in the breed early maturity, both for killing as milk chickens or broilers in cockerels and laying in the pullets; that prolonged crowing means prolificacy in egg production; and that retardation of beginning to crow means delayed maturity, but generally increased size of body.

* 'Official Report of National Poultry Conference, Reading' (London, 1899), p. 57.

CHAPTER XVII

LAWS OF BREEDING AND THEIR APPLICATION

Evolution—Species—Varieties—Atavism—Parental influence—Are white fowls delicate?—Habit and instinct—Consanguinity—Sex—Mating—New Breeds

EVOLUTION.

THE student may regard it as presumptuous to use the term 'Laws of Breeding.' Whilst certain influences or forces have apparently definite results, the difficulties of the subject are so great, and our knowledge is so limited, that merely the borders have been explored. Philosophers from the time of Aristotle have given their attention to the problems involved and theorized respecting them. In the light of advancing knowledge, of later revelations, many long-accepted theories have had to be abandoned, and probably so-called laws which appear complete will have at least to be reconsidered. That is, however, the way of advancement. The theorist is the herald of all progress, or, as clearly stated by the late Professor Henry Drummond:* 'Without some hypothesis no work can ever be done, and, as everyone knows, many of the greatest contributions to human knowledge have been made by the use of theories either seriously imperfect or demonstrably false. This is the age of the evolution of Evolution. All thoughts that the evolutionist works with, all theories and generalizations, have been themselves evolved and are now being evolved. Even were his theory perfected, its first lesson would be that it was itself but a phase of the evolution of further opinion, no more fixed than a species, no more final than the theory which it displaced. Of all men the evolutionist, by the very nature of his calling, the mere tools of his craft, his understanding of his hourly shifting place in the always moving and ever more mysterious world, must be humble, tolerant, and undogmatic.'

It is in that spirit we approach consideration of the question. The real meanings of life have only begun to be understood within the last fifty years. The work of Herbert Spencer, Charles Darwin, Alfred Richard Wallace, and others, has opened fresh pages in the great book of Nature, but these great men have freely acknowledged how much there is yet to learn. One question appears to defy all investigation—the Secret of Life, which remains locked up in the great Creator's cabinet.

* 'The Ascent of Man,' by Henry Drummond (London, 1894), p. 9.

SPECIES.

The use of the term 'species' is in connection with those distinct forms of animals and birds which are distinct from, and do not interbreed with, others beyond the first generation. They may produce hybrids, but stop at that point. The tendency in Nature is to groups. The four species of Galli may be said to form one group, but they do not breed together, and thus maintain their individualities. The reason for this is unknown, but is a determined fact, an indication of the importance of submitting all theory to the stern test of practice. A large number of species are the same as others in primary characters, but vary in secondary characters, which latter would appear to be the expression of something unknown, but of the greater importance. For instance, the horse, the ass, and the zebra are very similar in shape, form, and habits, but they are distinct species, and do not interbreed, even though they may live on the same soil and food, and under the same conditions as each other. On the other hand, horses bred under the most diverse conditions in any part of the world, upon absolutely different foods, and developed upon extreme lines, will freely mate, and their progeny be fertile. So it is with poultry. The differences in primary characters between a large duck and a small goose are less than between the Rouen and Indian Runner ducks, but whilst the latter freely cross, the former do not. Such limitations must be recognised by the breeder.

VARIETIES.

In spite of the fact that there is a constant tendency to variation in all poultry, increasingly so when

domesticated, like produces like to a remarkable extent, and is the sheet-anchor of the breeder; otherwise he would never know what would be the result of his efforts. If he mates Dorkings, he obtains Dorkings; Rouen ducks produce him the same, and so on. There may be variations in minor directions, capable of increase and perpetuation, but they are minor and most pronounced in merely artificial characters. Generally speaking, the progeny will resemble the parents not only in type, but in character and quality. As we have already seen, variations and the evolution of breeds and varieties, inclusive of increased size and fecundity, are largely due to change of conditions. As Darwin has so well said:* 'Man has no power of altering the absolute conditions of life; he cannot change the climate of any country; he adds no new element to the soil; but he can remove an animal or plant from one climate or soil to another, and give it food on which it did not subsist in its natural state. . . . He unintentionally exposes his animals and plants to various conditions of life, and variability supervenes, which he cannot even prevent or check.' That the tendency to variation is weakened where the fowls are bred under the same conditions for generations is within the observation of all breeders, as also is the further fact that fixity of type and of colour is greater in accordance with the length of time during which breeding has been conducted on the same lines. In that way we may find an explanation why certain types are so persistent. These have been bred for many generations, and maintain their influence. We find this in men and in all classes of animals. Among some races of exhibition poultry it is often carried to such an extreme in the development of artificial points that everything is sacrificed to that end, and the virility of the breed almost destroyed. With all pure races there is a tendency to work out, to exhaust their vigour by general enfeeblement. That can be prevented by what is known as out-crossing, which is referred to at length in 'Poultry-Keeping as an Industry for Farmers and Cottagers,' Chapter V.

ATAVISM.

One of the most powerful factors in the breeding of any class of stock is what is commonly called the law of reversion, or, to use the scientific term, atavism, by which is meant the influence of ancestors. Every breeder has bad evidence of this influence, which sometimes seriously upsets his calculations. The inheritance not only of external characters, but also of qualities such as temperament, productiveness, flesh formation, and the maternal instinct, are equally influenced by the progenitors. Of course, the longer any race is bred upon definite lines the weaker are certain tendencies, but even in the purest of stock we possess now and again there appear variations which exhibit this tendency to a marked degree. In many breeds of poultry frequently there appear brown feathers, even in black and white self-coloured varieties. Probably this is one of the most marked tendencies to atavism met with. The explanation simply is that the original fowl had a considerable amount of red or brown in its plumage, and if our different races were allowed to breed under natural conditions, without selection being brought to bear upon them, in the course of a very few generations they would revert to the original type. Sometimes purchasers of birds have been disposed to think that the specimens sold to them were not pure because chickens appeared with feathers distinctly different from those of their parents. Whilst undoubtedly a good deal of crossing has taken place amongst the different breeds, at the same time the appearance of red or brown feathers is no direct proof, and in many cases is simply a result of changed conditions. We know that in crosses atavism comes into play more strongly than in the pure races, due to the fact that the fresh blood thus introduced strengthens certain dormant influences, and thus they resume their power. This point is one to which Darwin gave great attention. 'When two distinct races are crossed, it is notorious that the tendency in the offspring to reversion to one or both parent forms is strong and endures for many generations.'* And again: 'With crossed breeds the act of crossing in itself certainly leads to the recurrence of long-lost characters, as well as of those derived from either parent form. That a being should be born resembling in certain characters an ancestor removed by two or three, and in some cases by hundreds or even thousands of generations, is assuredly a wonderful fact.'†

Whilst, therefore, there can be no question that our system of maintaining pure breeds and of carefully preserving them from other influences fixes the character, at the same time the latent or dormant influences handed down from ancestors will now and again exert their influence. Upon this question of fixity of character Darwin says:‡ 'It is a general belief amongst breeders that the longer any character has been transmitted by a breed, the more fully it will continue to be transmitted. I do not wish to dispute the truth of the proposition that inheritance gains strength simply through long continuance, but I doubt whether it can be proved. In one sense the proposition is little better than a truism; if any character has remained constant during many generations, it will be likely to continue so if the conditions of life remain the same. So, again, in improving a breed, if care be taken for a length of time to exclude all inferior

* 'Variation of Animals and Plants under Domestication,' by Charles Darwin, F.R.S. (London, 1885), vol. i., p. 2.

* 'Variation of Animals and Plants under Domestication,' by Charles Darwin, F.R.S. (London, 1885), vol. ii., p. 8.
† *Ibid.*, p. 25.
‡ *Ibid.*, p. 37.

individuals the breed will obviously tend to become pure, as it will not have been crossed during many generations by an inferior animal.'

The great naturalist whose name has been given above dealt very fully with this question of reversion; but there is a point which we have not hitherto seen noted or given the prominence which it appears to deserve—namely, may not those birds which show signs of reversion often be valuable because of their increased vigour? This suggestion is obtained from the fact that in many cases, without any intercrossing, change of conditions will lead to alterations in the way we have indicated. It is a well-known fact that if we take animals from one part of the earth to another, even though they are bred most carefully from parents selected on both sides of the approved type, the tendency to variation is very much greater than under the original conditions. But it is also equally true that in many cases, at any rate, the vigour of the animals is considerably enhanced, and it would appear to be reasonable to assume that this greater vigour has given strength to certain latent characters, and therefore the general strength of the animal is increased. It is unnecessary, in this connection, for us to give examples, as they are within the observation of every careful breeder. The usual custom, however, is to eliminate as quickly as possible all those specimens called by fanciers 'wastrels,' and by Americans 'culls.' We are not sure that this is altogether as wise as at first sight might appear, and it may be that many of the rejected birds, if they were used in a proper manner, would be valuable for giving renewed strength to our stock. It is the easiest thing in the world to sacrifice the stamina of our poultry, and many instances could be cited where, by striving for improvement of external characters, the economic qualities have been to a great extent reduced.

In respect to both the characters and qualities of our domestic poultry, it is apparent that both good and bad are handed down, sometimes missing one or two generations, but appearing again and again. Especially is this true when crosses are made or new breeds formed. In an older-established race there may be a remote tendency, through a long-past ancestor, to, say, feathers on the legs, but which is dormant. If crossed with another race in which is a like tendency, the union of these two may give results far beyond the mathematical proportion of their respective values. Even change of conditions may have a like result. Atavism is, therefore, a factor which cannot be ignored by the breeder. What is true as to external characters is equally so in respect to internal qualities. A good layer breeds good layers, and *vice versâ*; a hen laying brown eggs breeds pullets which will do the same.

PARENTAL INFLUENCE.

It is generally accepted * that the male parent influences external characters more than does the hen, and that the female parent controls internal qualities, such as temperament, fecundity, etc., more than the cock, though in neither case are the limitations in only one direction. Briefly stated, breeding males should be chosen to improve and fix colour of plumage, vigour, and general character, and the female for racial type and economic qualities; but with affinity, not antagonism, between the two sexes. The question is discussed more fully below in dealing with Mating.

ARE WHITE FOWLS DELICATE?

It is a common impression among naturalists that all white-haired animals and white-plumaged birds are not so hardy as those with coloured hair or feathers. Frequently objection is made to white races of poultry on the ground that they are delicate. The late Charles Darwin gave expression to that opinion, and as a consequence its correctness was generally assumed. Our own experience, and that of many others, does not, however, confirm it. For instance, it is strange if white-plumaged or white-furred birds or animals are weaker than those with coloured plumage that we should find the former almost entirely within the Arctic Zone, where the conditions of life are very much more severe than in the Temperate or Torrid Zones. It may be suggested that the reason why we find the white animals and birds in the Arctic regions is due to the law of survival of the fittest, they being not so much seen by their enemies as are the latter. This undoubtedly has had a great influence, but still there remains the striking fact that the white-furred animals are amongst the most vigorous of all our races, and are able to withstand the rigours of the climate.

In Dr. A. R. Wallace's work on 'Darwinism' the same opinion is expressed. The writer says: † 'The correlation of a white colour and blue eyes in male cats with deafness, and of the tortoise-shell marking with the female sex of the same animal, are two well-known but most extraordinary cases. . . . Buckwheat in flower is also said to be injurious to white pigs, but not to black. In the Tarentino black sheep are not injured by eating the *Hypericum crispum*, a species of St. John's wort, which kills white sheep. White terriers suffer most from distemper, white chickens from the gapes. White-haired horses or cattle are subject to cutaneous diseases from which the dark-coloured are free, whilst both in Thuringia and the West Indies it has been noticed that white or pale coloured cattle are much more troubled by flies than are those which are brown or black.'

* 'Poultry-Keeping as an Industry for Farmers and Cottagers,' by Edward Brown, F.L.S. (London, 1904), p. 30.

† 'Darwinism,' by A. R. Wallace, LL.D. (London, 1889), p. 170.

On reading this, we communicated with Dr. Wallace, placing before him the facts, of which mention has been made above, with regard to animals in the Arctic Zone, and in reply he said that he had made no personal observations on the subject, but had accepted the opinion held by Darwin.

Here we came to a point where it was necessary that there should be some definite conclusion arrived at. Of course, anyone who has studied natural history must know that in many cases the statements made are perfectly true. If we take the birds and animals and fishes found in, say, the Mammoth Cave, Kentucky, which are bleached white because of the fact that they live always in darkness, they are distinctly more delicate than those which are coloured and live in the open air; but this weakness may be, and is probably, due to some other cause, the lack of colour being owing to the lack of sunshine. Frequently in the case of animals, and probably in plants, any delicacy which arises may be due to a want of crossing. If we have white-plumaged fowls, for instance, we do not cross them with any carrying coloured feathers, and there is thus a greater tendency to inbreeding; whereas in coloured birds, if we want to bring in fresh vigour and to modify any characteristics, we can cross with many other races, and in this way avoid degeneracy. The question is, however, capable of solution.

M. Louis Vander Snickt, of Brussels, speaking at the Reading Conference, 1899, said: 'There exists in animals two whites—a weak white, due to albinoism (absence of pigmentation), and a strong white on dark ground, the strongest of all colours, resulting from the union of all other colours.'

The difference between the two is not at all difficult to find out, because where there is the combination of colours in the white this has either a very slight blue tinge, or in some cases a creamy appearance, especially in the sunshine; whereas, on the other hand, when there is the absence of pigment the bird or animal has a washed-out appearance, and the absence of colour indicates itself in this way. The latter are albinos, the former are not. The great majority of our races of fowls with white plumage are as hardy as others, unless they are weakened by inbreeding, which, together with unnatural conditions, would tend to destroy the darker pigments making up the white, and induce the dull, insipid albino. These remarks apply chiefly to the yellow and dark-legged races.

HABIT AND INSTINCT.

Mistakes are often made as to the instinctive actions and those which are due to habit or the result of experience. The common method is to include in the term 'instinct' all actions which are apparently the result of natural volition, but, as seen below, many of these are due to example or experience. Artificial methods of rearing have helped to a clearer definition between instinct and habit.

Mr. Lloyd Morgan thus describes the two functions:* 'Instincts are congenital, adaptive, and coordinated activities of relative complexity, and involving the behaviour of the organism as a whole. They are not characteristic of individuals as such, but are similarly performed by all like members of the same more or less restricted group, under circumstances which are either of frequent recurrence or are vitally essential to the continuance of the race. While they are, broadly speaking, constant in character, they are subject to variation analogous to that found in organic structures.' Also:† 'A habit is a more or less definite mode of procedure or kind of behaviour which has been acquired by the individual, and has become, so to speak, stereotyped through repetition.'

Walking, scratching, pecking, eating, drinking, crouching when frightened, and the crowing of cockerels, are instinctive to the young, and also the sexual and maternal functions when older may be regarded as instinctive.

Mr. Lloyd Morgan mentions that‡ 'ducklings a day or two old, dropped into a tepid bath, kicked vigorously and excitedly for a few seconds, but in a minute were swimming with easy, rapid motion, and pecking at the marks on the sides of the bath.' Yet instinctive action may be stimulated by example, for the same author remarks:§ 'In broods of chicken brought up under experimental conditions by themselves, and without opportunities of imitating older birds, are one, or two, or three more active, vigorous, intelligent, and mischievous birds. They are the leaders of the brood; the others are their imitators. Their presence raises the general level of intelligent activity. Remove them, and the others shows a less active, less inquisitive, less adventurous life, if one may so put it; they seem to lack initiative.' Among habits may be named the avoidance of water in quantity by chickens and young turkeys, the rejection of certain classes of food, perching, returning to their own dwelling even from a considerable distance, and seeking shelter.

CONSANGUINITY.

Some time ago the writer was consulted as to a serious trouble in a district of England where duck-breeding is a considerable industry. It was found that soft bill was very prevalent—that is, the young ducklings were so soft in the bill that they could not break through the shell. After careful observation and inquiry we came to the conclusion

* 'Habit and Instinct,' by C. Lloyd Morgan, F.G.S. (London, 1896), pp. 27-28.
† *Ibid.*, p. 1. ‡ *Ibid.*, p. 62. § *Ibid.*, 182

that this was chiefly owing to inbreeding. Large numbers of ducks were kept, and the people in the district had the idea that they were the best ducks in the world. They simply bought males from one another, and thus the birds of the whole countryside were practically of the same family. The introduction of fresh blood from a distance has had a great deal to do with the removal of the trouble. But what is true in this case is equally so in many other parts, although perhaps the effects are not so apparent. It must be borne in mind that in these days, especially with some of the newer breeds, it is very difficult to secure absolutely fresh stock, and unless inquiry is made there is always the risk that, even though we are buying 200 or 300 miles from home, those purchased may be related to the ones already in possession.

In the case of wild animals and birds there must be a certain amount of inbreeding, but what is less harmful in the wild state becomes very serious under domestication, where we limit those natural influences which help to preserve the stamina and vigour of the race. The late Charles Darwin shows very clearly the evil effects of close breeding:*

'Long-continued, close interbreeding between the nearest relations diminishes the constitutional vigour, size, and fertility of the offspring, and occasionally leads to malformations, but not necessarily to general deterioration of form or structure. This failure of fertility shows that the evil results of interbreeding are independent of the augmentation of morbid tendencies common to both parents, though this augmentation no doubt is often highly injurious. Our belief that evil follows from close inbreeding rests to a certain extent on the experience of practical breeders, especially of those who have reared many animals of quickly-propagating kinds, but it likewise rests on several carefully-recorded experiments. With some animals close interbreeding may be carried on for a long period with impunity by the selection of the most vigorous and healthy individuals, but sooner or later evil follows. The evil, however, comes on so slowly and gradually that it easily escapes observation, but can be recognised by the almost instantaneous manner in which size, constitutional vigour, and fertility are regained when animals that have long been interbred are crossed with a distinct family.'

We have, of course, to recognise that a certain amount of inbreeding has been practised, and is essential for the perfection of any race of animals or birds, and for the production of high-class stock it is probable that this is the most speedy way of securing that object. But there are serious penalties arising from the transgression of what may be regarded as a natural law, and it should be our endeavour to minimize the effects as far as possible. Something can be done by securing birds which have been reared upon different soil and under different conditions. For instance, if fowls of one family have been reared, say in the East of Scotland, for several generations, and others in the South of England, although the original stock might be related, the changed conditions will have so altered them that practically they have lost the close relationship; but, be it noted, this would only be after several generations.

There are many other ways in which the evil influences of inbreeding are to be noted. Albinoism, twisted feathers and toes, weak combs, and wry tails, are all frequently caused by inbreeding. These will, however, suffice for the purpose we have in view—namely, to call the attention of breeders to what is a great and serious danger. We do not think, from the evidence obtainable, that inbreeding is actually the cause of disease if the birds are absolutely healthy, but, tending as it does to refinement and delicacy of constitution, it reduces the power of the birds to withstand attacks of disease, and hence they are more easily affected than those bred in a natural manner. We have constantly to combat the tendency in poultry, and, in fact, all animals under domestication, towards enfeeblement, and it is essential to keep that fact in view. We cannot urge too strongly the necessity of introducing fresh blood from time to time, and also to insure that the blood is really such as will help to maintain the size, vigour, and stamina of the race.

SEX.

Under natural conditions the rule of life appears to be that the sexes are very nearly equal, although in some directions it would seem that this is not absolutely the case. It must always be borne in mind, in considering the relative number of males and females of any race or species, that the males are more exposed to danger, and that the proportionate number of deaths amongst males is greater during the period of development and early maturity than in the case of the females. Under domestication, however, this rule—if it may be termed so—is modified to a considerable extent, though probably not nearly so much as is generally supposed. Even under domestication, however, the males are exposed to greater dangers than the females, and thus, to preserve the absolute equality of the sexes, it would be necessary that a greater number of males should be produced. So far as many races of our animals are concerned, however, the desire of their owners is that there shall be a much larger number of females. This does not apply to such animals as are used for draught, but in the case of milk production and also in connection with poultry it is necessary that there shall be something like six to ten times as many females in profit as males are kept, and in some cases the number is even greater. Although there have been abundant theories with regard to this

* 'Variation of Animals and Plants under Domestication,' by Charles Darwin, F.R.S. (London, 1885), p. 159.

question, the amount of positive fact has been very small indeed, and it is not too much to say that at the present moment our knowledge as to the forces which are at work in this direction is very limited.

As to all the statements which are made from time to time—and some of which are more than 2,000 years old—that the sex of the future bird can be discerned by the shape of the egg, or by the time at which it is laid, these may be dismissed absolutely. There are, however, several points which do help us to some extent. It has been shown in many cases, and certainly to a sufficient degree to command our attention, that if the male bird is older than the pullets the tendency will be to increase the number of males, and it has been suggested that this is an effort on the part of Nature to preserve the sex which is threatened with earlier extinction. The latter suggestion can scarcely, however, be accepted. Nature does not work in that way. But whilst not for a moment doubting the result of the mating referred to, it is more likely to be due to the relative physical conditions of the parents than to any question of age, although this physical condition may be the result of age. There are several observations which help us towards the idea which is now more or less accepted—namely, that the condition of the body of the mother has much to do with the sex of its offspring. In the case of mammalia it is easily seen that this would be much more apparent than in the case of birds, because the influence of the mother would extend to a much greater period—in fact, until the time of birth; but we must bear in mind that a well-fed—and by this term we mean a suitably-fed—hen would affect the ovum or yolk of the egg, which is the food reserve of the chicken, and thus the same result would be achieved. Evidence has been given by some of the best observers which all tends in this direction. One French naturalist states that furriers have recorded that in fruitful regions more furs of females are always to be bought than in unfruitful districts. Another scientist says that female calves are born to a greater extent if the cow is poorly fed.

It is very evident that there is no effect without a cause, and we do not believe that even in the question of sex chance is any explanation of the variations which take place. Some determining influence must be at work, although we may not know what that influence is. The practical application of the knowledge which we refer to is contained in a very interesting book published by the late Dr. L. Schenk, Director of the Embryological Institute in Vienna.* Many of his theories are probably unsupported by fact, but none the less the importance of diet seems to be very great indeed, and there can be no question that his theories are borne out by a large amount of practical experience. He shows that in certain regions and amongst certain people where meat forms the principal diet only, male—or principally male—offspring would be produced; whilst, on the other hand, feeding the mother upon a highly nitrogenous diet with fat, and adding only so much carbohydrates as is absolutely necessary to prevent its want being felt, would tend to the production of females. Here we have what may in process of time help us to an explanation of the larger number of males produced when animals and birds are kept under domestication, because there can be no question that the mistake which is generally met with is feeding our animals too well, and especially upon the starchy foods which go to produce fat. We know by experience that a fat hen is seldom a good breeder, but if the giving of fat tends to increase the number of males as compared with females, then it is a further disadvantage. What we want, therefore, is to feed our hens, at any rate, in order to produce more pullets, upon nitrogenous foods, and thus keep them in hard condition of body, with as little fat as possible upon them, whilst, on the other hand, the male birds should be fed to a much fuller extent. We are not here suggesting that by the adoption of such a system as this we can anticipate regularly the exact number of cockerels and pullets produced, because in all Nature there are reactive influences, and if the attempt is made to throw all the weight in one direction, then Nature would assert herself and seek to preserve the balance more equitably. The whole question is, however, in the experimental stage.

* 'The Determination of Sex,' by Dr. Leopold Schenk, English translation (London, 1898).

MATING.

From what has been said as to the relationship of external characters with internal qualities, it is evident that without fixity of type the efforts of the poultry-keeper would be retarded. Such characters are the result of generations of breeding, either natural or artificial, for the perpetuation of definite qualities. In advocating, therefore, pure breeds and pure breeding, we are doing so in the interests of the community at large, and with a view to increased food-supply. That is what Nature does under all conditions; or, to take an example from other stock: 'It has been said that if a flock of sheep were divided into lots, and each lot sent to different districts of Britain, and kept from interbreeding with other kinds, each would, in the course of a few generations, develop points and peculiarities which could easily be accentuated by selection only, and thus breeds be manufactured altogether different from the original strain and from each other.'* Mongrelism spells degeneracy; properly selected pure races, enhanced production in every country. Our truest method of insuring success is to select races which are suited to our conditions and to the object we have in view.

* 'Agricultural Zoology,' by Primrose McConnell, B.Sc. (London, 1902), p. 299.

But, having stated the position we hold clearly, we cannot come to any other conclusion than that the present system of adopting fixed colour standards for both males and females is, except for self-coloured breeds, a serious blunder, against all natural laws, and working for the enfeeblement, degeneracy, and ultimate ruin of the race. What is known as type, in which coloration of plumage holds a very minor position, may be as rigid as we can make it, even in regard to what appear small differences, but that is not antagonistic to natural methods. The Arab horse and the Russian pony are of the same species, but differ in type or character, and it would be folly to ignore, as some appear to suggest, that such differences exist. In every breed the essential factor to secure its perpetuation and improvement is to define the type, to recognise that combination which makes it distinct from all other breeds. And in this combination we must include what may be regarded as minor characters. Such cannot be avoided. In many cases they are as important as those parts which bulk larger. Square body, full breast, large wings, shortish neck and legs, medium comb, and five toes, combine to make the Dorking. Change or absence of any one of these would destroy the type. It would be a Dorking no longer. Hence in breeding we place type in the frontal position.

It is when we come to coloration of plumage that we join issue with present ideas of breeding, especially in respect to the females. A great deal has been said as to the injury done by breeding for show, and by some of those who were most responsible for the present system and for the adoption of fixed standards, but we have failed to find that they even attempt to indicate where the mistake lays, and how it can be remedied. Fanciers have carried point-breeding to an extreme, to the serious injury for practical purposes of many races, but they have only followed the guidance in the first place of some of those who are now their chief critics, who have apparently never sought for the cause, much less pointed out a better way by means of which purity of race can be maintained, even in combination with the pleasures and profits of exhibiting, the fascination of breeding for which cannot be questioned, without adversely affecting the economic and essential qualities.

The conclusion at which we have arrived, after many years of study and observation, is that, whilst colour standards may—nay, must—be adopted for males in all species of domestic poultry, no such rigidity should be observed with the females. Our friend M. Louis Vander Snickt, of Brussels, goes further, in that he would accord to colour a less important place even in males, and condemns the fixing of colour of plumage almost entirely. We find, however, that Nature teaches us the need for maintenance of pure races, and that colour in the males is a fixed quantity. In nearly all birds the males are bright in plumage and very uniform in colour, whilst the hens have a much more homely garb. Probably in the former case the richer hues are maintained by selection on the part of the hens, as the handsomer the male the more attractive he would be to them. On the other hand, hens would be less seen by enemies when upon their nests if dull in colour. Their mates would be able to protect them by drawing attention to themselves if attacked, as they are better equipped for fighting. The chief object in Nature is apparently perpetuation of the race. When we observe poultry of all species bred under natural conditions, it is to find that there is great variation in the colour of females. The same was true in Game fowls—and is yet to a considerable extent—and other highly-coloured races, as they were bred for vigour and strength, often indicated by brightness of plumage. In Black-red Game of the purest strains the pullets bred are very varied in hue. This is clearly indicated by Mr. F. C. Tomkins, who says,* dealing with Black-red Game: 'It is, in my opinion, useless to describe the colour of hens to be used for cockerel-breeding, or the colour of cocks required for pullet-breeding, unless we know how they are bred, as the produce might be quite different.'

In white and black feathered fowls the question is unimportant, but standards which insist upon pencilling, lacing, spangling, and chain-mail in hens are a mistake. To their adoption we owe, more than any other cause, the degeneracy of certain breeds. Even for exhibition such fixity is folly, leading to the system of double matings for the production of cockerels and pullets respectively, which, however interesting from the breeder's position, is to be condemned for practical purposes, and seriously militates against the usefulness of any breed. Colour in the males is important, often indicating virility when combined with general character, but in the hens type should be supreme. For these reasons we have in our descriptions of the different races paid little attention to the plumage of females.

NEW BREEDS.

Statements are frequently made—usually by those who have been breeders of poultry for many years—that the newer breeds of poultry are not worthy of consideration, or are inferior to the older races. Whilst we have no word to say against the latter, it is desirable to examine whether the claim made that the older breeds are more profitable and of greater commercial value than the new ones is tenable. If it were so, then, of course, it would be inadvisable to multiply varieties of poultry simply for the variations obtained by different external characters. Perhaps the best way will be to take forty years ago as the basis, when it will be found that amongst the varieties

* 'New Book of Poultry,' by Lewis Wright (London, 1902), p. 358.

then unknown are the following: Anconas, Coucou de Malines, Faverolles, Indian Game, Langshans, Leghorns, Orpingtons, Plymouth Rocks, and Wyandottes in fowls, and Pekins and Indian Runners in ducks. There may be others, especially among the more ornamental varieties, such as Bantams, etc.; but as this question is approached from the economic standpoint, it is better to keep to those which may be termed utility poultry.

On examination of the list given above it will at once be seen that some of the most prolific, and consequently the most valuable, races for egg production were unknown, in this country at any rate, forty years ago. No one can for a single moment doubt that the introduction of these different breeds has been of the greatest service in the stimulation of interest in poultry-keeping, and, moreover, in the quantity of eggs and poultry produced in the country.

But there is another reason why the introduction of new varieties should be encouraged. It must be borne in mind that with a rapidly-reproducing race like poultry, when bred in domestication, the rate at which its vigour and stamina are exhausted must be accelerated. It would appear to be almost a law of Nature that forms of life, or varieties of those forms, only last for a certain period, which may be tens or hundreds of years. Then they seem to work out, and some other form takes their place. The geological records show that this is undoubtedly the case. When we bring any race under domestication, therefore, this tendency must be considerably enhanced, with the result that if we are to keep poultry or any other animal or plant to the fore there must be out-crosses of blood to give that strength which purity of breeding tends to reduce. These infusions of fresh blood have, of course, the result of practically modifying the external characteristics, with new forms as a natural sequence. We see the same influence in animals and plants of various kinds, and what is true in that direction is equally so with poultry.

That there is always a tendency to unduly multiply the number of so-called breeds cannot be questioned, and many during the past few years have come forward, but failed either to impress their value upon the public mind, or when bred did not maintain the special features claimed for them. Every new breed must pass through the fire in this way. It is bound to be subjected to adverse criticism, and unless it can stand criticism it has no right to exist. The hard words which have been said about most of the newer varieties are evidence of this state of things. Those, however, who promote the new breeds must be willing to bear comment, and if they own a breed of intrinsic merit the criticism will do no harm, but a considerable amount of good.

It is surprising that whilst in some species, notably flowers, the man who could bring out a blue rose would be heralded as having accomplished a wonderful thing, or if he could discover or by cross-fertilization produce a fresh form of plant, honour and credit would fall to him; but according to some writers the reverse should be the case in connection with poultry. We do not see why what is true in one direction should not be equally so in another, and think that those who have introduced fresh varieties of poultry have frequently rendered a much greater service to their day and generation than those who have simply produced a new plant merely for ornamental purposes.

APPENDICES

A.—NOMENCLATURE OF RACES AND SUB-RACES OF POULTRY

In the following tables the names of races and sub-races are given as far as known. Where no designation is made, the breed or variety has not been recognised by breeders of the respective countries. It is necessary to keep in view that in many cases the nomenclature of the country of origin is adopted without translation. The references in last column are to the pages where the races or sub-races are described.

FOWLS.

English.	*French.*	*German.*	*Dutch.*	*Danish.*	*Italian.*	*Spanish.*	*Hungarian.*	*Russian.*	*Page*
BRITISH :									
Dorking	Dorking	Dorking	Dorking	Dorking	Dorking	Dorking	Dorking	Dorking	24
Dark or Coloured	Foncé	Dunkel	Zwart or Gekleurd	Mörke	Dorata	Obseuro	Sötét	Temnja	29
Red	Rouge	—	Rood	Röde	Rosso	Rojo	Veres	—	29
Silver-grey	Argenté	Silberhalsig	Zilver-grÿs	Sölvgraa	Argentata	Plateada	Ezüst	Serji	30
White	Blanche	Weiss	Wit	Hvide	Bianca	Blanca	Fehèr	Bellii	30
Cuckoo	Coucou	Gesperbert	Koekoek	Graatavlede	Cucu	Cuca	Kenderma-gos	Kukshetch	30
Sussex	—	—	—	—	—	Sussex	Sussex	—	30
Red or Brown	—	—	—	—	—	Roja or Parda	Veres	—	33
Light	—	—	—	—	—	Arminada	Világos	—	33
Speckled	—	—	—	—	—	—	Kenderma-gos	—	33
Game	Combattants anglaise	Englische Kaampfer	Engelsche Vechthoen-ders	Kamphons	Grande Com-battente	Combatiente Ingles	Közönséges	Boïzii	33
Black-breasted Red	Rouge à plas tron noir	Goldhalsig	Roode Zwart-borst	Sorebryn-stede röde	Dorata	Pechi Negro rojo	Fekete beg-yü veres	—	40
Bright Red	Doré	—	Levendig rood	Skinnende röde	—	Rojo	Világos veres	—	—
Brown-red	Rouge à plas-tron brun	Braunbrüs-tig	Bruin rood	Brun brys-tede röde	—	Pardo rojo	Barna veres	—	40
Blue-red	—	Blaue mit Goldbe-hang	Blauw rood	Blaa röde	—	Rojo azulado	Kék veres	—	—
Pile	Pile	Rotschecken	Pile	Rödeoghvid-brogede	Pile	Blanco y par-do rojo	—	—	40
Yellow Duckwing	—	Gelbe Enten-flugel	Geel Duck-wing	Gúle ande-vingede	—	Duckwing Amasillo	Sárga Kac-saszárny	—	40

Silver Duckwing	—	Silberhalsig	Zilver Duck-wing	Solvgraa an-devingede	—	Duckwing plateada	Ezüst Kac-saszarny	—	40
White	Blanche	Weiss	Wit	Hvide	Bianca	Blanca	Fehèr	—	41
Black	Noire	Schwarz	Zwart	Sorte	Nera	Negra	Fekete	—	41
Spangled	Papillotée	Porzellan-farbig	Gespikkeld	Spraglede	Paglinole	Manchado	Pettyes	—	41
Indian (Cornish) Game	Combattants des Indiens	Indische Kaampfer	Indische Vecht-hoender	Indiske Kam-phons	Indiana	Combatienta de Indias	Indiai	Indiiskie Boizii	41
Hamburgh	Hambourg	Hamburger	Hamburger or Hol-landsch Hoen	Hamborgerne	Ambergo	Hamburgo	Hamburg	Gamburrgckii	44
Gold-spangled	Pailletée doré	Goldlack	Goudlaken	Guldplett	Paillaitée dorata	Manchado dorada	Arany pettyes	—	48
Silver-spangled	Pailletée argenté	Silberlack	Zilverlaken	Solvplett	Paillaitée argentata	Manchado plateada	Ezüst pettyes	—	48
Black	Noire	Schwarz	Zwart	Sorte	Nera	Negra	Fekete	—	48
Gold-pencilled	Crayonné doré	Gold-sprenkel	Goudpel	Guldspoett	Crayonnée dorata	Listada dorada	Arany sàvos	—	48
Silver-pencilled	Crayonné argenté	Silber-sprenkel	Zilverpel	Solvspoett	Crayonnée argentata	Listada plateada	Ezust sàvos	—	48
Redcap	Chapon Rouge	Rothkappen	Roodkappen	Red Cap	Redcap	Cabeza roja	Veres bobitàs	—	48
Scotch Grey	Coucou d'Ecosse	Graue Schotten	Schotsch Grey	Graa Skottere	Coucou di Scozia	Cuca de Escocia	Szürke Skót	Skotch Grei	50
Orpington	Orpington	Orpington	Orpington	Orpington	Orpington	Orpington	Orpington	Orpington	52
Black	Noire	Schwarz	Zwart	Sorte	Nera	Negra	Fekete	Pa	55
Buff	Fauve	Gelb	Geel	Gule	Fulva	Leonada	Sàrga	Palliji	55
White	Blanche	Weiss	Wit	Hvide	Bianca	Blanca	Fehèr	Bellii	55
Spangled	Papillotée	Porzellan-farbig	—	Spraglede	—	Manchado	Pettyes	—	55
ASIATIC:									
Brahma	Brahma-pootra	Brahma	Brahma	Brahma	Brahma	Brahma pootra	Brahma	Brahma	56
Light	Herminé	Hell	Licht	Lyse	Ermillinata	Arminada	Vilagos	Svetlija	59
Dark	Inverse	Dunkel	Donker	Morke	Inversa	Invertida	Sötet	Temnija	59
Cochin	Cochin	Cochin	Cochin	Cochin	Cocincina	Cochinchina	Cochin	Kochin	59
Buff	Fauve	Gelb	Geel	Gule	Fulva	Leonada	Sàrga	Falliji	60
Partridge	Perdrix	Rechuhn-farbig	Patrijs	Agerhøne-farvede	Perniee	Perdiz	Fogoly szinü	Kuropatcki	60
White	Blanche	Weiss	Wit	Hvide	Bianca	Blanca	Fehèr	Bellii	60
Black	Noire	Schwarz	Zwart	Sorte	Nera	Negra	Fekete	—	60
Cuckoo	Coucou	Gesperbert	Koekoek	Graatavede	Cucola	Cuca	Kendermagos	—	60
Malay	Malais	Malayen	Maleier	Malayere	Malese	Malaya	Malay	Malaiskija	60
Red	Rousse	Weizenfarbig	Rood	Röde	Rosso	Rojo	Vörös	—	63
Black-red	Noire Rouge	Braun	Zwart rood	Sortröde	Dorata	Negro rojo	Fekete vörös	—	63
White	Blanche	Weiss	Wit	Hvide	Bianca	Blanca	Fehèr	—	63
Black	Noire	Schwarz	Zwart	Sorte	Nera	Negra	Fekete	—	63
Langshan	Langshan	Langshan	Langshan	Langshan	Langshan	Langshan	Langshan	Langshan	63
Black	Noire	Schwarz	Zwart	Sorte	Nera	Negra	Fekete	—	66
White	Blanche	Weiss	Wit	Hvide	Bianca	Blanca	Fehèr	—	66
Blue	Bleue	Blau	Blauw	Blaa	Azzurro	Azulado	Kèk	—	66

APPENDIX A (*continued*).

English.	*French.*	*German.*	*Dutch.*	*Danish.*	*Italian.*	*Spanish.*	*Hungarian.*	*Russian.*	*Page*
Java	Java	Java	Zijdehoen	Java	—	Java	Javai	—	66
Black	Noire	Schwarz	Zwart	Sorte	—	Negra	Fekete	—	67
White	Blanche	Weiss	Wit	Hvide	—	Blanca	Fehèr	—	67
Mottled	—	Motlett	Gespikkeld	—	—	Moteada	Jarka	—	67
Ascel	—	Ascel	Azeel	Ascel	—	—	Ascelsi	—	67
Black Sumatra	Sumatra	Sumatra	Zwart Sumatra	Sorte Sumatraer	—	Sumatra Negra	Sumatrai	Sumatra	69
ITALIAN:									
Leghorn	Italien or Leghorn	Italiener	Leghorn or Italianer	Italiénere	Italiana	Leghorn or Livorna	Olasz	Leggorn	71
White	Blanche	Weiss	Wit	Hvide	Bianca	Blanca	Fehèr	—	75
Brown	Rouge	Rothuhnfarbig	Bruin	Bráne	Dorata	Doreada	Barna	—	75
Black	Noire	Schwarz	Zwart	Sorte	Nera	Negra	Fekete	—	77
Buff	Fauvre	Gelb	Geel	Gule	Fulva	Leonada	Sárga	—	77
Cuckoo	Coucou	Gesperbert	Koekoek	Graatavlede	Cucola	Cuca	Kendermagos	—	77
Pile	Pile	Rotscheeken	Pile	Rödebrogede	—	—	—	—	77
Duckwing	—	Entenflügel	Duckwing	Andevingede	—	—	—	—	77
Mottled	Caillouttée	Houdanfarbig	Gespikkeld	Spattede	—	Moteada	Jarka	—	77
Ancona	Ancone	Ancona	Ancona	Ankona or Hondanfarvede Italiener	Ancona	Ancona	Anconai	—	77
Voldarno	—	—	—	—	Voldarno	Voldarno	Volderno	—	79
Black	—	—	—	—	Nera	Negra	Fekete	—	80
White	—	—	—	—	Bianca	Blanca	Fehèr	—	80
Polverara	Polverara	Polverara	—	—	Polverara	Polverara	Polverara	—	80
Black	Noire	Schwarz	—	—	Nera	Negra	Fekete	—	80
White	Blanche	Weiss	—	—	Bianca	Blanca	Fehèr	—	80
Cuckoo	Coucou	Sperber	—	—	Cucola	Cuca	Kendermagos	—	80
Gold	Doré	Goldlack	—	—	Dorata	Dorada	Arany	—	80
Silver	Argenté	Silberlack	—	—	Argentata	Plateada	Ezüst	—	80
Padovana	—	—	—	—	Gigante Padovana	Paduana	—	—	80
Maggi	—	—	—	—	Maggi	Maggi	—	—	81
FRENCH:									
Bresse	La Bresse	Bresse	La Bresse	Bresse	Bresse	Bresse	Labresso	Bresse	82
Black	Noire	Schwarz	Zwart	Sorte	Nera	Negra	Fekete	—	84
White	Blanc	Weiss	Wit	Hvide	Bianca	Blanca	Fehèr	—	84
Grey	Grise	Grau	Grijs	Graa	Grigio	Gris	Szürke	—	84
Blue	Bleue	Blau	Blauw	Blaa	Azzurro	Azulada	Kek	—	84
La Flèche	La Flèche	La Flèche	La Flèche	La Flèche	La Flèche	La Flèche	La Flèche	La Flesch	84
Du Mans	Mans	Le Mans	Le Mans	Le Mans	Le Mans	El Mans	—	Manskija	85
Crèvecœur	Crèvecœur	Crèvecœur	Crèvecœur	Crèvecœur	Crèvecœur	Crèvecœur	Crèvecœur	Krov-Ker	86

Black	Noire	Schwarz	Zwart	Sorte	Nera	Negra	—	—	87
White	Blanc	Weiss	Wit	Hvide	Bianca	Blanca	—	—	88
Blue	Bleue	Blau	Blauw	Blaa	Azzurro	Azulado	—	—	88
Caumont	Caumont	—	—	—	Caumont	Caumont	—	—	88
Caux	Caux	—	—	—	—	Caux	—	—	88
Courtes Pattes	Courtes Pattes	Franzos Krüper	—	Courtes Pattes	—	Paticorta	—	Korotkonoschki	88
Houdan	Houdan	Houdan	Houdan	Houdan	Houdan	Houdan	Houdan	Gudan	89
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White	Blanche	Weiss	Wit	Hvide	Bianca	Blanca	Fehèr	—	141
Chamois	Chamois	Chamois	Chamois	Chamois	Camoscia	Gamuza	Sárgás	—	141
Buff	Fauvre	Gelb	Geel	Gule	Fulva	Leonada	Sárga	—	141
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Landhen	—	—	—	Danske Landhon	—	—	—	—	148
AMERICAN:									
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Plymouth Rock	Plymouth Rock	Plymouth Rock	Plymouth Rock	Plymouth Rock	Plymouth Rock	Plymouth Rock	Plymouth Rock	Plimut Rok	150
Barred	Coucou	Gesperbert	Koekoek	Tvarstribede	Coucou	Cuca	Szurke pettyes	—	152
White	Blanc	Weiss	Wit	Hvide	Bianca	Blanca	Fehèr	—	153
Black	Noir	Schwarz	Zwart	Sorte	Nera	Negra	Fekete	—	154
Buff	Fauvre	Gelb	Geel	Gule	Fulva	Leonada	Sárga	—	154
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White	Blanc	Weiss	Wit	Hvide	Bianca	Blanca	Fehèr	—	161
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Ronquières	Ronquières	—	—	Ronqueres	—	Ronquières	—		
AMERICAN:									
American Bronze	Bronze et Cuivres	Broncefarbig	Ameryk Brons	Amerikanske Bronsefarvede	Selvaggia d'America	Broneeada Americana	Amerikai	Bronzovijia	198
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B.—JUDGING ON UTILITY LINES

SCALE OF POINTS.

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Legs and feet	10
Comb and wattles	10
Head and neck	10
Condition	10
Tail and wings	10
Colour of plumage	15
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CUTS OR DEDUCTIONS.

	Up to
SYMMETRY:	
Bad shape	10
Short body in table breeds	5
Round back	5
Incorrect carriage	10
SIZE:	
Excess or deficiency, per pound	10
LEGS AND FEET:	
Coarseness of bone	5
Excess or deficiency of length	5
Pale colour in yellow or dark	5
Soot or yellow in white	5
Twisted toes	5
Bad colour in nails	5
COMB AND WATTLES:	
Excess or deficiency in size	5
Coarseness of texture	5
Broken or additional spikes	5
Dull in colour	5
HEAD AND NECK:	
Rough face	5
Deficiency in crest or beard	5
Bad colour in beak	5
Coarse or ill-shaped neck	5
CONDITION:	
Dull plumage	5
Loss of essential feathers	5
TAIL AND WINGS:	
High or low tail	5
Loss of sickles	5
Dropped wings	5
COLOUR OF PLUMAGE:	
Defects in body colour	10
Spots or patches	5
Lack of uniformity	5

DISQUALIFICATIONS.

Want of general character of breed.
Bent breast bone.
Deformities or enlargements.
Great excess of size in small and medium breeds.
Small body in table and general purpose breeds.
Wrong colour of legs and feet.
Feathers on shanks of clean-legged breeds.
Absence of feathers on shanks of feathered breeds.
Additional or absence of toes.
Wrong class of comb.
Squirrel or wry-tail.
Wrong colour of plumage.

C.—FURTHER NOTES ON THE ORIGIN OF THE TURKEY.

Since the earlier chapters were printed, the following has been received from the Count de las Navas, librarian at the Royal Palace, Madrid, which appears to show that the turkey was discovered at an earlier date than has hitherto been accepted, and was first introduced into Spain in the year 1500.

In a work entitled 'The Zoology of Columbus and the First Explorers of America,' by Juan Ignasio de Arcenas, published at Havana in 1888, we find that 'it is usually asserted that the turkey was first found in Mexico, and that, on the whole, it was a stranger to South America. But both assertions are incorrect. Pedro Nino was its discoverer, on the coast of Cumana, north of Venezuela, on the voyage made by him in 1499. He bought some from the Indians at the rate of four glass beads for each fowl. It is certain that in 1500, on the return of this fortunate expedition to Bayeria, in Galicia, besides the monkeys, parrots, and other curiosities (including a great quantity of pearls) collected by Nino in America, turkeys were seen for the first time on European soil.

'There is no mention of them on the other side of the Orinoco; we may therefore take the course of this river as the limit of this breed on the Atlantic side of South America. On the Pacific side they reached as far south as the borders of Peru. In 1502 Columbus found "very large fowls," with feathers like wool, in the island of Guanaja, the easternmost of the Ruatan group, off the coast of Honduras, which was known in early times under the general name of the Guanajan Islands. He also found them in Honduras, and in every part of the coast up to the Isthmus. They must have been introduced into Cuba between the year 1511, when Cuba was conquered, and 1517, when Yucatan was discovered. The name Guanaja, which is given to this bird in Cuba, is sufficient indication of its origin in the Guanaja Islands, whither frequent expeditions were then sent in order to obtain Indian slaves, who were also called Guanajos. It is known that one of the expeditions to these islands, commanded by Fernandez de Cordoba, landed in Yucatan; this was the original conquest of Mexico.

'Throughout New Spain this bird was very common. The Indians bred it in their households, and there were always several millions in Montezuma's palaces, which were used to feed the birds, snakes and other animals that were there. There was also a wild species in the country. Their general name was *totolui*, the hen *cihuatslui*, the cock *huexoloth*.

'From Mexico the turkey was carried to Europe, and also, apparently, to San Domingo, for Oviedo made the mistake of thinking that this country was its sole place of origin. He describes it as widely distributed in 1525, in the Auh'las and Costa Jinue, and says that he himself had the opportunity of seeing it in Nicaragua and other places.'

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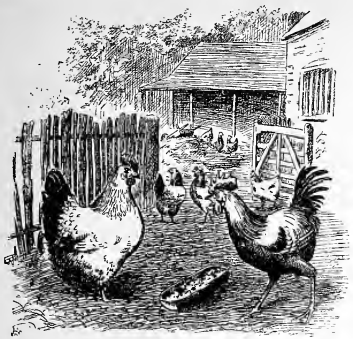

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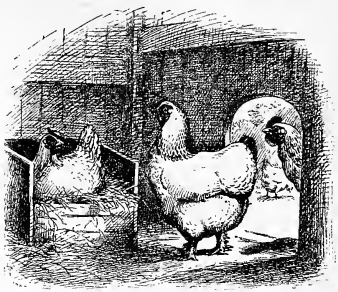

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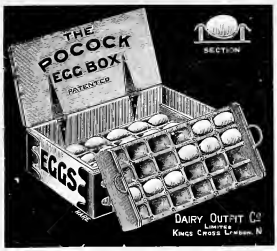

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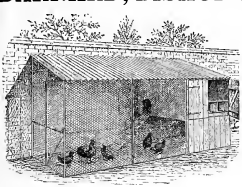

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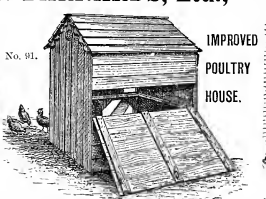

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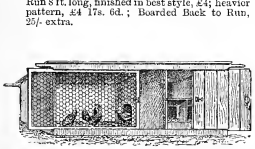

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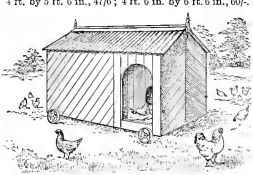

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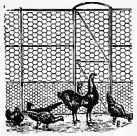

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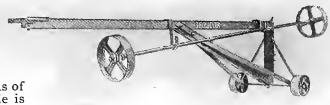

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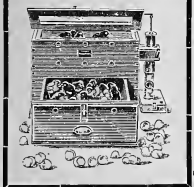

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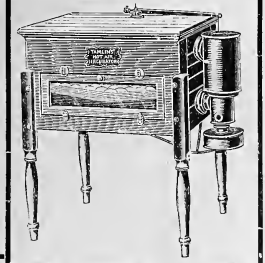

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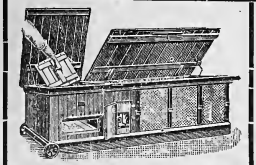

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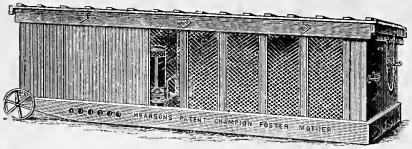

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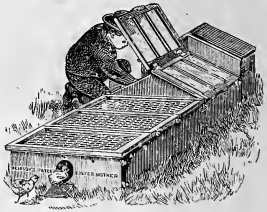

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